Dell™ Inspiron™ 5000

REFERENCE AND TROUBLESHOOTING GUIDE

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April 2000 P/N 3959U Rev. A01

Safety Instructions

Use the following safety guidelines to help protect your computer from potential damage and to help ensure your own personal safety.

When Using Your Computer

As you use your computer, observe the following safety guidelines:

- Do not attempt to service the computer yourself. Always follow installation instructions closely.
- Do not carry a battery pack in your pocket, purse, or other container where metal objects (such as car keys) could short-circuit the battery terminals. The resulting excessive current flow can cause extremely high temperatures and may result in damage from burns.
- Be sure that nothing rests on your AC adapter's power cable and that the cable is not located where it can be tripped over or stepped on.
- Place the AC adapter in a ventilated area, such as a desk top or on the floor, when you use it to run the computer or to charge the battery. Do not cover the AC adapter with papers or other items that will reduce cooling; also, do not use the AC adapter inside a carrying case.
- Do not use your computer in a wet environment, for example, near a bath tub, sink, or swimming pool or in a wet basement.
- Do not push objects into air vents or openings of your computer. Doing so can cause fire or electric shock by shorting out interior components.
- Use only the AC adapter and batteries that are approved for use with this computer as indicated in this document. Use of another type of battery pack or AC adapter may risk fire or explosion.
- Before you connect the computer to a power source, ensure that the voltage rating of the AC adapter matches that of the available power source:
  - 115 volts (V)/60 hertz (Hz) in most of North and South America and some Far Eastern countries such as South Korea and Taiwan
  - 100 V/50 Hz in eastern Japan and 100 V/60 Hz in western Japan
  - 230 V/50 Hz in most of Europe, the Middle East, and the Far East

- To help prevent electric shock, plug the AC adapter and peripheral power cables into properly grounded power sources. These cables are equipped with three-prong plugs to help ensure proper grounding. Do not use adapter plugs or remove the grounding prong from a cable. If you must use an extension cable, use a three-wire cable with properly grounded plugs.
- If you use an extension cable with your AC adapter, ensure that the total ampere rating of the products plugged in to the extension cable does not exceed the ampere rating of the extension cable.
- To remove power from the computer, turn it off, remove the battery pack, and disconnect the AC adapter from the electrical outlet.
- If your computer includes an integrated or optional (PC Card) modem, disconnect the modem cable during an electrical storm to avoid the remote risk of electric shock from lightning via the telephone line.
- To help avoid the potential hazard of electric shock, do not connect or disconnect any cables or perform maintenance or reconfiguration of this product during an electrical storm.
- PC Cards may become very warm during normal operation. Use care when removing PC Cards after their continuous operation.
- Do not dispose of battery packs in a fire. They may explode. Check with local authorities for disposal instructions.
- When setting up the computer for work, place it on a level surface.
- When traveling, do not check the computer as baggage. You can put your computer through an X-ray security machine, but *never* put your computer through a metal detector. If you have the computer checked by hand, be sure to have a charged battery available in case you are asked to turn on the computer.
- When traveling with the hard-disk drive removed from the computer, wrap the drive in a nonconducting material, such as cloth or paper. If you have the drive checked by hand, be ready to install the drive in the computer. You can put the hard-disk drive through an X-ray security machine, but *never* put the drive through a metal detector.
- When traveling, do not place the computer in overhead storage compartments where it could slide around. Do not drop your computer or subject it to other mechanical shocks.
- Protect your computer, battery, and hard-disk drive from environmental hazards such as dirt, dust, food, liquids, temperature extremes, and overexposure to sunlight.
- When you move your computer between environments with very different temperature and/or humidity ranges, condensation may form on or within the computer. To avoid damaging the computer, allow sufficient time for the moisture to evaporate before using the computer.

  NOTICE: When taking the computer from low-temperature conditions into a warmer environment or from high-temperature conditions into a cooler environment, allow the computer to acclimate to room temperature before turning on power.

- When you disconnect a cable, pull on its connector or on its strain-relief loop, not on the cable itself. As you pull out the connector, keep it evenly aligned to avoid bending any connector pins. Also, before you connect a cable make sure both connectors are correctly oriented and aligned.
- Handle components with care. Hold a component such as a memory module by its edges, not its pins.
- When removing a memory module from the system board or disconnecting a peripheral device from the computer, wait 5 seconds after turning off the computer before removing the memory module or disconnecting the device to help avoid possible damage to the system board.
- Before you clean your computer, turn it off, unplug it from its power source, and remove the battery pack(s).
- Clean your computer with a soft cloth dampened with water rather than with liquid or aerosol cleaners.
- Clean the display with a soft, clean cloth and commercial window cleaner that does not contain wax or abrasives. Apply the cleaner to the cloth; then stroke the cloth across the display in one direction, moving from the top of the display to the bottom. If the display contains grease or some other contaminant, use isopropyl alcohol instead of commercial window cleaner.hese chapters a
- If your computer gets wet or is damaged, follow the procedures described in Chapter 2, "Troubleshooting Your Computer." If, after following these procedures, you confirm that your computer is not operating properly, contact Dell Computer Corporation. (See Chapter 4, "Getting Help," for the appropriate telephone number.)

Ergonomic Computing Habits

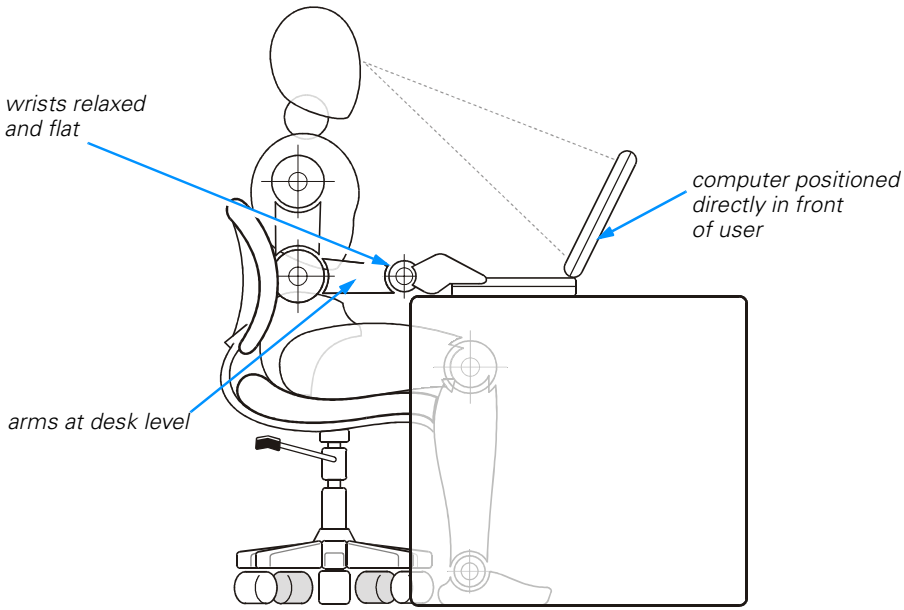
CAUTION: Improper or prolonged keyboard use may result in injury.

CAUTION: Viewing the display or external monitor screen for extended periods of time may result in eye strain.

For comfort and efficiency, observe the following ergonomic guidelines when setting up and using your computer:

- Position your computer directly in front of you as you work.
- Adjust the tilt of the computer's display, its contrast and/or brightness settings, and the lighting around you (such as overhead lights, desk lamps, and the curtains or blinds on nearby windows) to minimize reflections and glare on the display.
- When using an external monitor with your computer, set the monitor at a comfortable viewing distance (usually 510 to 610 millimeters [20 to 24 inches] from your eyes). Make sure the monitor screen is at eye level or slightly lower when you are sitting in front of the monitor.
- Use a chair that provides good lower-back support.

- Keep your forearms horizontal with your wrists in a neutral, comfortable position while using the keyboard, trackball, touch pad, or external mouse.
- Always use the palmrest with the keyboard, touch pad, or trackball. Leave space to rest your hands when using an external mouse.
- Let your upper arms hang naturally at your sides.
- Sit erect with your feet resting on the floor and your thighs level.
- When sitting, make sure the weight of your legs is on your feet and not on the front of your chair seat. Adjust your chair's height or use a footrest, if necessary, to maintain proper posture.
- Vary your work activities. Try to organize your work so that you do not have to type for extended periods of time. When you stop typing, try to do things that use both hands.



When Removing or Installing Memory Modules

Before removing or installing memory modules, perform the following steps in the sequence indicated.

NOTICE: The only time you should ever access the inside of your computer is when you are installing memory modules.

NOTICE: Wait 5 seconds after turning off the computer before disconnecting a peripheral device or removing a memory module to help prevent possible damage to the system board.

1. Turn off your computer and any attached peripherals.
2. Disconnect your computer and peripherals from electrical outlets to reduce the potential for personal injury or shock. Also, disconnect any telephone or telecommunication lines from the computer.
3. Remove the main battery from the Battery Bay and, if necessary, the secondary battery from the media bay.
4. Ground yourself by touching the unpainted metal surface of the I/O panel on the back of the computer.

   While you work, periodically touch the I/O panel to dissipate any static electricity that might harm internal components.

Protecting Against Electrostatic Discharge

Static electricity can harm electronic components inside your computer. To prevent static damage, discharge static electricity from your body before you touch any of your computer's electronic components, such as a memory module. You can do so by touching an unpainted metal surface on the computer's I/O panel.

As you continue to work inside the computer, periodically touch an I/O connector to remove any static charge your body may have accumulated.

You can also take the following steps to prevent damage from electrostatic discharge (ESD):

- When unpacking a static-sensitive component from its shipping carton, do not remove the component from the antistatic packing material until you are ready to install the component. Just before unwrapping the antistatic packaging, be sure to discharge static electricity from your body.
- When transporting a sensitive component, first place it in an antistatic container or packaging.
- Handle all sensitive components in a static-safe area. If possible, use antistatic floor pads and workbench pads.

The following notice may appear throughout this document to remind you of these precautions:

NOTICE: See "Protecting Against Electrostatic Discharge" in the safety instructions at the front of this guide.

The following notice may appear throughout your Dell documentation to remind you of these precautions:

NOTICE: See "Protecting Against Electrostatic Discharge" in your *System Information* guide.

Preface

About This Guide

This guide is intended for anyone who uses a Dell portable computer. It can be used by both first-time and experienced computer users who want to learn about the features of the computer. This guide also provides basic troubleshooting procedures and instructions for using the Dell Diagnostics to test your computer and its components.

Summaries of the chapters and appendixes of this guide follow:

- Chapter 1, "Options and Upgrades," describes the installation procedures for the options and upgrades available from Dell for your computer.
- Chapter 2, "Troubleshooting," contains some initial checks and procedures that you can use to solve basic computer problems and for some general guidelines on analyzing software problems.
- Chapter 3, "Installing System Software," provides detailed instructions for reinstalling system drivers and software.
- Chapter 4, "Getting Help," describes the help tools Dell provides to assist you if you have a problem with the computer. It also explains how and when to call Dell for technical assistance.
- Appendix A, "Technical Specifications," is intended primarily as reference material if you are interested in learning more about the details of your computer.
- Appendix B, "Using the System Setup Program," shows you how to access the system setup program, which allows you to change system settings, such as the boot device sequence.
- Appendix C, "System Messages," defines system messages and suggests a solution if the message indicates a problem.
- Appendix D, "Regulatory Notices," is for those who are interested in which regulatory agencies have tested and approved the computer.
- Appendix E, "Limited Warranty and Return Policy," describes the warranty for your Dell computer and the "Total Satisfaction" Return Policy.

Warranty and Return Policy Information

Dell Computer Corporation ("Dell") manufactures its hardware products from parts and components that are new or equivalent to new in accordance with industry-standard practices.

For information about the Dell warranty and return policy, see Appendix E, "Limited Warranty and Return Policy."

Other Documents You May Need

In addition to this *Reference and Troubleshooting Guide*, the following documentation is included with your computer:

- The *Setup Guide* provides instructions for setting up a Dell Inspiron computer and for using your computer's hardware.
- The system Help contains essential information you need to use your computer. To open the Help, click the **Start** button, point to **Programs** –> **Dell Accessories**, and click **System Help**.

You may also have one or more of the following documents:

- Information updates describing changes to your computer or software.

*NOTE: Always read any included update **before** consulting any other documentation—the updates contain the latest information.*

- Operating system documentation is included if Dell installed the operating system on your hard-disk drive. This documentation describes how to configure and use your operating system software.

Notational Conventions

The following subsections list notational conventions used in this document.

Notes, Notices, and Cautions

Throughout this guide, blocks of text may be accompanied by an icon and printed in bold type or in italic type. These blocks are notes, notices, and cautions, and they are used as follows:

NOTE: A NOTE indicates important information that helps you make better use of your computer system.

NOTICE: A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

CAUTION: A CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

Typographical Conventions

The following list defines (where appropriate) and illustrates typographical conventions used as visual cues for specific elements of text throughout this document:

- *Interface components* are window titles, button and icon names, menu names and selections, and other options that appear on the monitor screen or display. They are presented in bold.

  Example: Click **OK**.

- *Keycaps*, the labeling that appears on the keys on a keyboard, are enclosed in angle brackets.

  Example: <Enter>

- *Key combinations* are series of keys to be pressed simultaneously (unless otherwise indicated) to perform a single function.

  Example: <Ctrl><Alt><Enter>

- *Commands* presented in lowercase bold are for reference purposes only and are not intended to be typed at that particular point in the discussion.

  Example: "Use the **setup** command to...."

  In contrast, commands presented in the Courier New font are intended to be typed as part of an instruction.

  Example: "Type `format` to format the diskette in drive A."

- *Filenames* and *directory names* are presented in lowercase bold.

  Examples: **autoexec.bat** and **c:\windows**

- *Syntax lines* consist of a command and all its possible parameters. Commands are displayed in lowercase bold; variable parameters (those for which you substitute a value) are displayed in lowercase italics; constant parameters are displayed in lowercase bold. The brackets indicate items that are optional.

  Example: **del** [*drive***:**] [[*path*]*filename*] [**/p**]

- *Command lines* consist of a command and may include one or more of the command's possible parameters. Command lines are presented in the Courier New font.

  Example: `del c:\myfile.doc`

- *Screen text* is text that appears on the screen of your display or external monitor. It can be a system message, for example, or it can be text that you are instructed to type as part of a command (referred to as a *command line)*. Screen text is presented in the Courier New font.

  Example: The following message appears on your screen:

  ```
  No boot device available
  ```

- *Variables* are symbols for which you substitute a value. They are presented in italics.

  Example: module *n* (where *n* represents the memory module number).

Contents

Chapter 1 Options and Upgrades 1-1

Available Options and Upgrades 1-1
Using Drives in the Media Bay 1-2
Swapping Media Bay Devices 1-2
Swapping Devices While the Computer Is Turned Off 1-2
Swapping Devices Using Softex BayManager 1-3
Installing an Internal Hard-Disk Drive 1-4
Returning a Hard-Disk Drive to Dell 1-5
Installing Memory Modules 1-6
Connecting Other External Devices 1-9
Using a Port Replicator 1-9

Chapter 2 Troubleshooting 2-1

Checking the Basics 2-1
Check Connections 2-2
Evaluate Environmental Factors 2-2
Check the Electrical Power Source 2-3
Running the Dell Diagnostics 2-3
Start the Dell Diagnostics 2-4
Dell Diagnostics Main Screen 2-6
Confirm the System Configuration Information 2-7
Use the Dell Diagnostics Help Menu 2-8
Menu 2-8
Keys 2-8
Device Group 2-8
Device 2-8
Test 2-9
Versions 2-9
Exit the Dell Diagnostics 2-9

Troubleshooting Procedures 2-9
Restart Your Computer 2-10
Dry Out a Wet Computer 2-10
Test a Dropped or Damaged Computer 2-11
Recover From a Program That Is Not Responding 2-12
Restart a Computer That Is Not Responding 2-12
Resolve Audio Problems 2-13
Resolve CD-ROM or DVD-ROM Drive Problems 2-13
Resolve Diskette Drive Problems 2-13
Resolve Display Problems 2-14
Resolve External Monitor Problems 2-14
Resolve External Keyboard Problems 2-15
Resolve Hard-Disk Drive Problems 2-15
Resolve Hardware Conflicts 2-15
Resolve Infrared Port Problems 2-16
Resolve Memory Problems 2-17
Resolve Modem, Fax, and Internet Connection Problems 2-18
Resolve PC Card Problems 2-18
Resolve Software Problems 2-19
Install and Configure Software 2-19
Resolve Touch Pad and Mouse Problems 2-19
Resolve Television Problems 2-20
Check the Television Type Setting 2-20
Check the System Setup Program Settings 2-20

Chapter 3 Installing System Software 3-1

Installing the Windows 98 Operating System 3-1
Recreating the Hibernate (Save-to-Disk Suspend) File (Windows 98) 3-2
Boot Your Computer With the System Software CD 3-2
Delete the Hibernate File 3-3
Create the Hibernate File 3-4
Enable Hibernate Support 3-4
View the Hibernate File Information 3-4
Installing Drivers and Utilities for Windows 98 3-5
Install the Audio Driver (Windows 98) 3-5
Install the Video Driver (Windows 98) 3-6
Install the Touch Pad Driver (Windows 98) 3-6
Install Softex BayManager (Windows 98) 3-7
Install the Internal Modem Driver (Windows 98) (Optional) 3-8
Install the Software DVD Decoder (Windows 98) (Optional) 3-9
Configuring the Television Control Panel Setting 3-10
Setting and Changing the DVD-ROM Drive Region Code 3-10

Install the Intel SpeedStep Utility (Windows 98) (Optional) 3-10
Installing Drivers and Utilities for Windows 2000 3-11
Install the Audio Driver (Windows 2000) 3-11
Install the Video Driver (Windows 2000) 3-12
Install the Touch Pad Driver (Windows 2000) 3-13
Install the Software DVD Decoder (Windows 2000) (Optional) 3-14
Setting and Changing the DVD-ROM Drive Region Code 3-15
Install the Intel SpeedStep Utility (Windows 2000) (Optional) 3-15
Install the System Help From the System Software CD 3-16
Download the System Help From the Dell Support Web Site 3-17
Updating Drivers and Utilities 3-17

Chapter 4 Getting Help 4-1

Technical Assistance Help Tools 4-1
World Wide Web 4-2
AutoTech Service 4-2
TechFax Service 4-3
Automated Order-Status System 4-3
Technical Support Service 4-3
Problems With Your Order 4-3
Product Information 4-4
Returning Items for Warranty Repair or Credit 4-4
Before You Call 4-5
Dell Contact Numbers 4-7

Appendix A Technical Specifications A-1

Appendix B Using the System Setup Program B-1

Accessing the System Setup Program B-1
Navigating Through the System Setup Program B-2
Main Menu B-3
System Devices Menu B-4
Security Menu B-5
Power Menu B-6
Boot Menu B-7
Exit Menu B-8

Appendix C System Messages C-1

Appendix D Regulatory Notices D-1

FCC Notices (U.S. Only) D-2
Class A D-2
Class B D-3
Modem Regulatory Information D-3
Fax Branding D-4
IC Notice (Canada Only) D-4
Modem Regulatory Information D-5
CTR21 Declaration D-6
New Zealand Telecom Warnings D-6
General D-6
Important Notice D-7
CE Notice (European Union) D-7
Battery Disposal D-8
EN 55022 Compliance (Czech Republic Only) D-8
VCCI Notice (Japan Only) D-8
Class A ITE D-9
Class B ITE D-9
Polish Center for Testing and Certification Notice D-9
Wymagania Polskiego Centrum Badań i Certyfikacji D-10
Pozostałe instrukcje bezpieczeństwa D-10
NOM Information (Mexico Only) D-11
Información para NOM (únicamente para México) D-12

Appendix E Limited Warranty and Return Policy E-1

Three-Year Limited Warranty (U.S. Only) E-1
Coverage During Year One E-1
Coverage During Years Two and Three E-2
General Provisions E-2
Three-Year Limited Warranty (Canada Only) E-3
Coverage During Year One E-4
Coverage During Years Two and Three E-4
General Provisions E-5
One-Year End-User Manufacturer Guarantee (Latin America and the Caribbean Only) E-5
Guarantee E-5
Exclusions E-6
Making a Claim E-6
Limitation and Statutory Rights E-6
"Total Satisfaction" Return Policy (U.S. and Canada Only) E-7
Macrovision Product Notice E-8

Index

Figures

Figure 1-1. Removing a Device From the Media Bay 1-3
Figure 1-2. Removing the Internal Hard-Disk Drive 1-5
Figure 1-3. Repackaging the Hard-Disk Drive 1-6
Figure 1-4. Removing the Memory Module Cover 1-7
Figure 1-5. Removing a Memory Module 1-8
Figure 1-6. Installing a Memory Module 1-8
Figure 2-1. Diagnostics Menu 2-5
Figure 2-2. Dell Diagnostics Main Screen 2-7
Figure 3-1. Diagnostics Menu 3-3
Figure 4-1. Diagnostics Checklist 4-6
Figure B-1. Main Menu B-3
Figure B-2. System Devices Menu B-4
Figure B-3. Security Menu B-5
Figure B-4. Power Menu B-6
Figure B-5. Boot Menu B-7
Figure B-6. Exit Menu B-8
Figure D-1. VCCI Class A ITE Regulatory Mark D-9
Figure D-2. VCCI Class B ITE Regulatory Mark D-9

Tables

Table 4-1. International Dialing Codes 4-8
Table 4-2. Dell Contact Numbers 4-9
Table A-1. Technical Specifications A-1
Table B-1. System Setup Program Navigation Keys B-2
Table C-1. System Error Messages C-1

CHAPTER 1
Options and Upgrades

This chapter describes the installation procedures for the options and upgrades available from Dell for your computer.

Available Options and Upgrades

Dell offers the following options for your computer:

- Internal 56-kilobyte/second (KB/sec) modem
- DVD-ROM drive module for the media bay
- Zip drive module for the media bay
- External devices, such as pointing devices, printers, external monitors, external keyboards, and numeric keypads
- Batteries
- Replacement hard-disk drives
- Port replicator with a Sony Philips Digital Interface (SPDIF) AC3 (may include an optional network interface controller [NIC])

NOTE: The Sony Philips Digital Interface does not function with the Microsoft® Windows® 2000 operating system.

- Memory modules (32-, 64-, 128-, 192-, and 256-megabyte [MB] capacities)
- Leather and nylon carrying cases
- External microphone, external speakers, and headphones
- Network PC Cards

To order any of these upgrades, call Dell. For instructions, refer to Chapter 4, "Getting Help," or to "Contacting Dell" in the system *Help*. To open the *Help*, click the **Start** button, point to **Programs —> Dell Accessories**, and click **System Help**.

Using Drives in the Media Bay

The media bay, located in the center of the front of the computer, supports the following types of drive modules:

- CD-ROM drive module
- CD-RW drive module
- DVD-ROM drive module
- Zip drive module

Dell ships your computer with a CD-ROM drive module (or an optional DVD-ROM drive module) installed in the media bay.

Swapping Media Bay Devices

You can swap devices while the computer is turned off or, by using the Softex BayManager application program, while the computer is turned on.

NOTE: Device swapping is a feature that is built into the Windows 2000 operating system. Consequently, Softex BayManager is not supported by Windows 2000.

NOTICE: To prevent irreparable damage to the docking connector, do not remove or replace media bay devices while the computer is connected to a port replicator.

Swapping Devices While the Computer Is Turned Off

1. Save and close any open files, exit any open application programs, and shut down the computer.
2. Remove the device from the media bay:
   a. Close the display and turn the computer over so that it is oriented as illustrated in Figure 1-1.
   b. Slide and hold the latch release in the direction of the arrow shown in Figure 1-1.
   c. Pull the device out of the media bay.

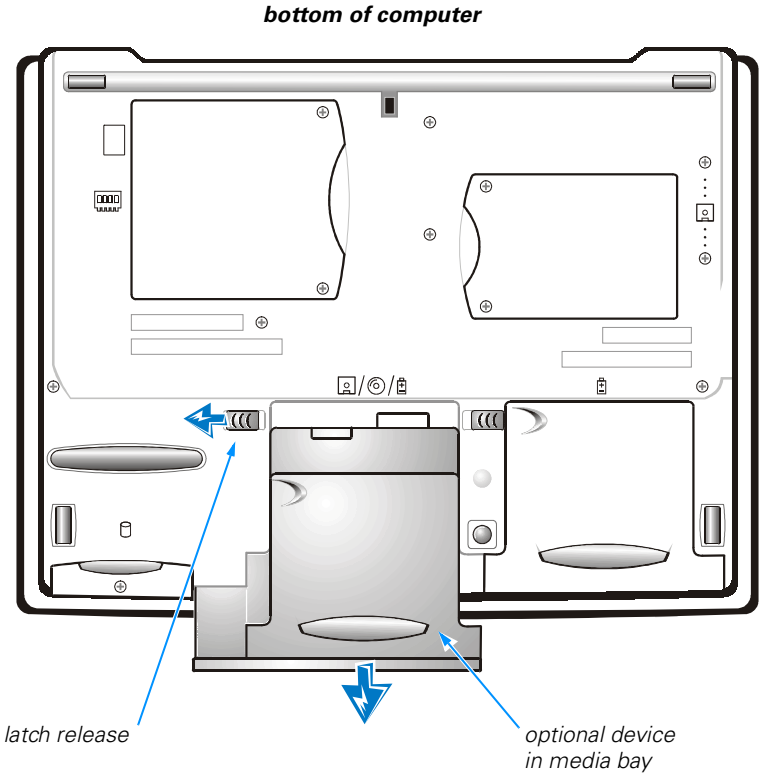


Figure 1-1. Removing a Device From the Media Bay

NOTICE: If you wish to insert another media bay device, insert the device before you dock and turn on the computer.

3. Insert the device into the media bay and push in the device until you see and hear the latch release click.

4. Turn on the computer.

Swapping Devices Using Softex BayManager

Softex BayManager is a utility that makes it possible to swap media bay devices without turning off the computer.

NOTICE: If you attempt to remove a device using the Softex BayManager utility and the computer is docked, you see an error message stating that the operation cannot be performed.

1. Right-click the Softex BayManager icon on the Microsoft® Windows® taskbar.

2. Click the appropriate option—**Remove/Swap** or **Insert a Device**.

3. Follow the instructions on the display.

   When the display is blank and the power indicator light flashes, it is safe to remove or swap devices.

Installing an Internal Hard-Disk Drive

NOTICE: Hard-disk drives are extremely fragile and must be handled carefully. Even a slight jar or bump can damage the spinning heads and plates, rendering the drive inoperable.

CAUTION: The hard-disk drive may be *hot* to the touch. *Do not touch* the metal housing of the hard-disk drive if you remove the drive from the computer when the drive is hot.

NOTES: You need the Microsoft Windows Installation CD and the System Software CD to install the Microsoft Windows operating system as well as device drivers and utilities on the new hard-disk drive.

The basic input/output system (BIOS) may not support hard-disk drives obtained from vendors other than Dell. Dell does not guarantee compatibility or provide support for hard-disk drives obtained from other sources.

NOTICE: To prevent data loss, turn off your computer before removing or installing a hard-disk drive. Do not remove the hard-disk drive if the computer is in standby mode or hibernate (save-to-disk suspend) mode, or if the hard-disk drive access indicator is lit.

To install an internal hard-disk drive, perform the following steps:

1. Save and close any open files, exit any open application programs, and shut down the computer.
2. Remove all installed batteries and peripherals, and disconnect the AC adapter cable from the computer.
3. Turn the computer over, and remove the screw securing the hard-disk drive cover as shown in Figure 1-2.

NOTICE: When the hard-disk drive is not in the computer, protect the drive from exposure to static electricity by storing it in protective antistatic packaging.

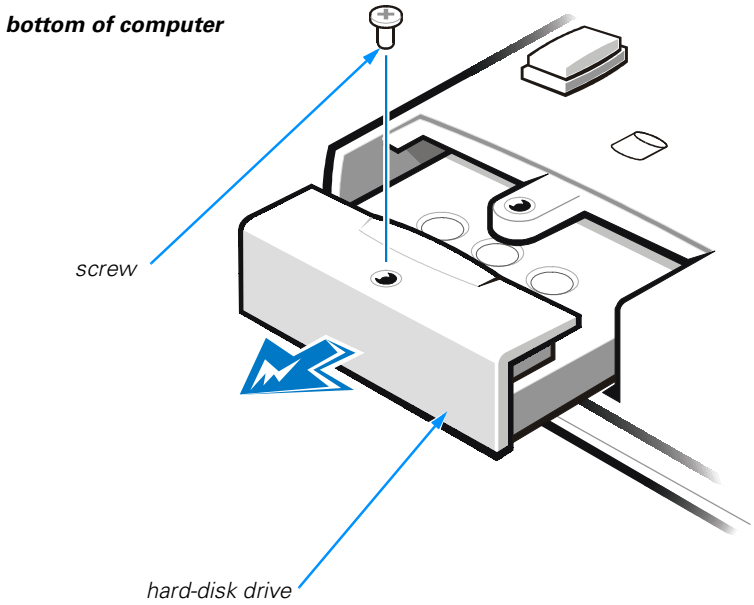


Figure 1-2. Removing the Internal Hard-Disk Drive

4. Slide out the hard-disk drive.
5. Remove the new hard-disk drive from its packaging.

   Save the original packaging to use when storing or shipping the hard-disk drive.

NOTICE: You may notice some resistance as the drive connects to its interface connector at the back of the hard-disk drive bay. Use firm, even pressure to slide the drive into place. Do not force the drive into place.

6. Slide the new drive into place.
7. Tighten the screw you loosened in step 3.
8. Test the drive by running the **IDE Devices** tests in the Dell Diagnostics.

   For information on running the diagnostics, see "Running the Dell Diagnostics" in Chapter 2.
9. Install the Dell-provided operating system as well as the drivers and utilities.

   See Chapter 3, "Installing System Software," for instructions.

Returning a Hard-Disk Drive to Dell

To return your hard-disk drive to Dell, you must ship it in its original foam packaging. Otherwise, the hard-disk drive may be damaged in transit.

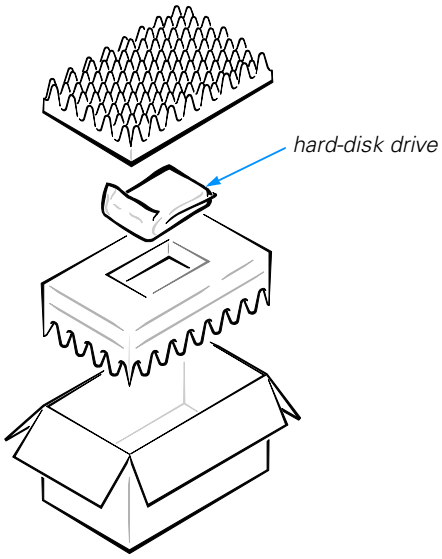


Figure 1-3. Repackaging the Hard-Disk Drive

Installing Memory Modules

NOTE: Your computer has two memory module sockets. All Dell memory modules (except the 192-MB capacity module) can be installed in either socket.

NOTICE: The 192-MB memory modules are socket-specific. Before installing a 192-MB memory module, refer to the markings on the memory module to determine which socket accepts the module.

CAUTION: Before working inside your computer, read "Protecting Against Electrostatic Discharge" found in the "Safety Instructions" at the front of this guide.

NOTICE: Do not install or remove a memory module when the computer is turned on, in standby mode, or in hibernate (save-to-disk suspend) mode.

To install a memory module, perform the following steps:

1. Save and close any open files, exit any open application programs, and shut down the computer.
2. Remove all installed batteries and peripherals, and disconnect the AC adapter cable from the computer.
3. Ground yourself by touching a metal input/output (I/O) connector on the back of the computer.
4. Turn the computer over as shown in Figure 1-4, remove the screws, and lift up the memory module cover.

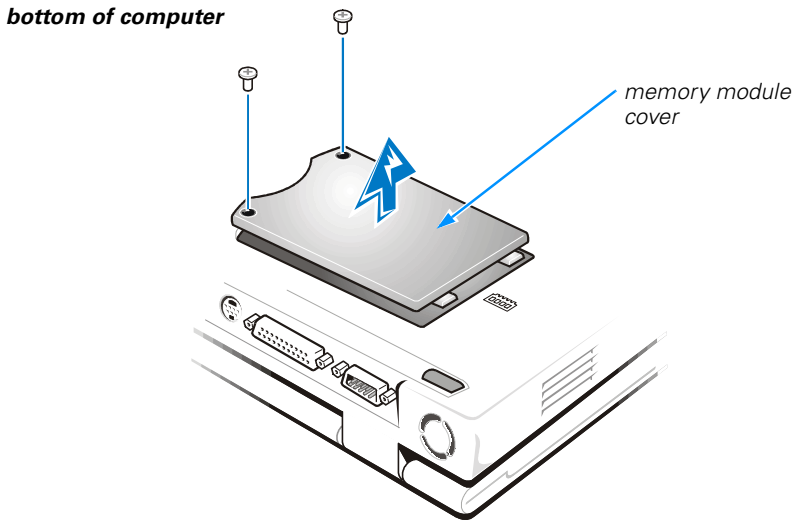


Figure 1-4. Removing the Memory Module Cover

NOTICE: To prevent damage to the computer, do not use tools to spread the inner metal tabs of the socket when you are installing or removing a memory module.

5. If you are replacing a memory module, remove the installed memory module.

   NOTES: The 192-MB memory modules are socket-specific. If you install a 192-MB memory module, refer to the markings on the memory module to determine which socket will accept the module.

   If a single memory module is installed and you are adding an additional memory module, put the additional module in the available socket. You must remove a memory module only to replace a module.

6. Using your fingernails, carefully spread apart the inner metal tabs of the memory module socket just far enough for the memory module to disengage from the socket (the module should pop up slightly). Then lift the memory module away from the socket.

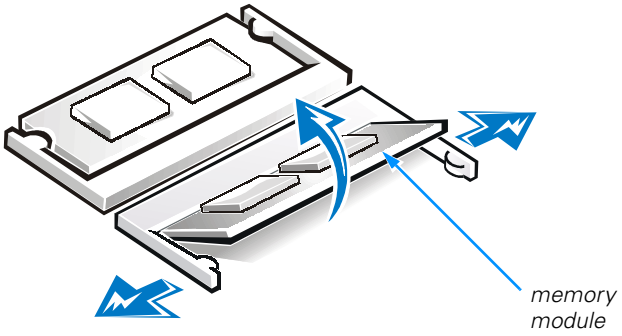


Figure 1-5. Removing a Memory Module

7. Insert the memory module as shown in Figure 1-6:

   a. Align the notch in the edge connector with the slot in the center of the memory module socket.

   b. Press the memory module edge connector firmly into the socket.

   c. Pivot the module down until it clicks.

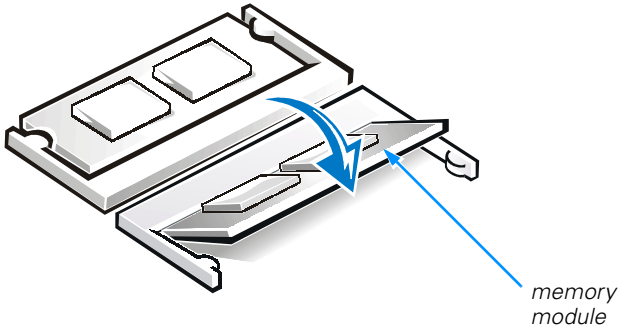


Figure 1-6. Installing a Memory Module

8. Replace the memory module cover screws.

9. Reinstall the battery in the battery bay.

10. Reconnect peripherals to your computer, and connect your computer and peripherals to electrical outlets.

11. Turn on the computer.

    As the computer boots, the system setup program detects the additional memory and automatically updates the system configuration information.

12. Confirm that the system configuration information reflects the newly installed memory by checking the **System Memory** value and the **Extended Memory** value on the **Main** menu of the system setup program.

    To enter the system setup program, press <F2> while the computer is booting. The **Main** menu appears. If the **System Memory** value *plus* the **Extended Memory** value does not equal the approximate total of the installed memory, the modules may not be installed properly. Repeat steps 1 through 12 until the memory total is correct.

    NOTES: The memory total shown in the system setup program may be approximately 384 KB less than the total amount of installed memory.

    If the memory module is not installed properly, the computer will not boot. No error message indicates this failure.

13. Run the **System Memory** test in the Dell Diagnostics to confirm that the installed memory modules operate correctly.

    For instructions, see "Running the Dell Diagnostics" in Chapter 2.

14. If you add additional memory to your computer, you must delete and recreate the hibernate (save-to-disk suspend) file on your hard-disk drive to accommodate the new memory.

    For instructions, see "Recreating the Hibernate (Save-to-Disk Suspend) File" in Chapter 3.

Connecting Other External Devices

For instructions, see "Connecting External Devices" in the system *Help*. To open the *Help*, click the **Start** button, point to **Programs—> Dell Accessories**, and click **System Help.**

Using a Port Replicator

If you purchased a port replicator from Dell, see the *Port Replicator User's Guide* for operating instructions.

CHAPTER 2
Troubleshooting

This chapter helps you to solve some typical computer problems. Complete the steps in this chapter before you call Dell for technical assistance. If you find that you need technical assistance to solve your problem, record your findings on a copy of the Diagnostics Checklist (see Figure 4-1) before you call Dell.

NOTE: Before you begin any of the troubleshooting procedures, ensure that ***Quiet Boot*** *is set to* ***Disabled*** *in the* ***Main*** *menu of the system setup program. See Appendix B, "Using the System Setup Program."*

CAUTION: To help prevent the risk of electrical shock, disconnect all external devices, remove the battery, and disconnect the AC adapter from the computer before installing or replacing the hard-disk drive and memory modules.

Checking the Basics

NOTE: If your computer is wet or damaged, proceed directly to "Dry Out a Wet Computer" or "Test a Dropped or Damaged Computer" found later in this chapter.

If the problem you are experiencing began after making a change to your computer, such as installing new hardware or software, undo the change if possible. If undoing the change resolves the problem, review the documentation and any updates or supplements (for example, readme files) for the software or hardware that you changed. Typically, readme files provide installation information, describe new product enhancements or corrections that have not yet been documented, and list known problems.

If you were trying to install new hardware, ensure that you changed the appropriate settings in the system setup program for the new hardware configuration (refer to Appendix B, "Using the System Setup Program").

NOTE: DellWare™ products are supported by the product manufacturer. Refer to the manufacturer's documentation that accompanies the item.

Check Connections

Be sure the following items are properly connected or installed:

- AC adapter and AC power cable
- Second battery or other optional device in the media bay
- Cables that connect external devices through the input/output (I/O) connectors and ports on the computer.

NOTE: See "System Features" in the system Help for the location of the external connectors and controls.

Loose or improperly connected cables are likely sources of problems for your computer, external monitor, or other peripherals (such as a printer, external keyboard, or mouse). A quick check of all cable connections can easily solve these problems. If the connector has two small thumbscrews, ensure that the screws are tight. In addition, check for damaged or frayed cables and for bent pins on connectors.

Evaluate Environmental Factors

A number of external factors, including temperature extremes and humidity, magnetic influences, sources of electromagnetic interference (EMI), and poor input power or signal quality, can interfere with the performance of your computer and attached devices. Monitors are especially susceptible to environmental factors. The following items can adversely affect the performance of a computer:

- Inadequate ventilation from operating the computer in a confined space, such as a desk enclosure
- Direct sunlight
- Power sags and surges
- Substandard electrical wiring
- Excessive telephone line noise
- High-voltage electrical appliances on the same circuit or placed in close proximity to the computer
- Generation of magnetic fields by speakers (especially a subwoofer) or a telephone placed too close to the monitor
- Fluorescent lights
- Use of electrical extension cords and keyboard and mouse extension cables
- Use of an overloaded power strip or multiple power strips from one electrical outlet
- Presence of electrical conduits in an adjoining wall or elevators on the other side of the wall
- Presence of large metal beams inside the wall behind the computer

To alleviate the effects of these factors, try removing the potential problem source or move the computer to another location.

Check the Electrical Power Source

If you are experiencing problems with power, perform the following checks:

- Check the computer power indicator. When lit, the power indicator verifies that the power supply is operating.
- Verify that the electrical outlet is functional by plugging an operational device, such as a lamp, into the outlet.
- Plug the computer directly into a functioning electrical outlet.
- If your computer is connected to a power strip, shut down the computer. Turn off and then turn on the power strip to reset it.

Running the Dell Diagnostics

The Dell Diagnostics helps you to check your computer hardware without any additional equipment and without destroying any data. By using the diagnostics, you can have confidence in your computer's operation. If you find a problem you cannot solve by yourself, the diagnostic tests can provide you with important information. Record this information on a copy of the Diagnostics Checklist (see Figure 4-1) before you call Dell for technical assistance.

NOTICE: The Dell Diagnostics is specifically designed for your computer. Do not run the Dell Diagnostics on any other computer. Using this diagnostic program with other computers may cause incorrect computer responses or result in error messages.

The Dell Diagnostics provides a series of menus and options from which you can choose particular device group tests. You can also control the sequence in which the tests are run. Other helpful features include:

- A menu category called **Options** that lets you run tests individually or collectively
- An option that allows you to choose the number of times a device group test is repeated
- The ability to display or print out test results, or to save them in a file
- The ability to choose the option to temporarily suspend testing if an error is detected, or to terminate testing if an adjustable error limit is reached
- A menu category called **Devices** that briefly describes each test and its parameters
- A menu category called **Config** that describes the configuration of the devices in the selected device group
- Status messages that inform you whether device group tests ran successfully
- Error messages that appear if problems are detected

If a major component or device in your computer does not function properly, you may have a component failure. You can use the Dell Diagnostics as long as the following components are functioning properly:

- Microprocessor
- Display
- Keyboard
- CD-ROM or DVD-ROM drive module

If you know which components you need to test, select the appropriate diagnostic device group tests you want to run. If you are unsure about how to begin diagnosing a problem, see the following sections.

Start the Dell Diagnostics

NOTES: The Dell Diagnostics runs in MS-DOS® mode. When the computer runs on a battery in MS-DOS mode, the battery status indicator glows amber when approximately 10 percent of the battery charge remains, and it flashes amber when approximately 3 percent of the battery charge remains. If the battery status indicator becomes amber, connect the computer to AC power using the AC adapter. If AC power is not available, turn off the computer until AC power is available.

The standby and hibernate modes are Windows power management features. These power management modes are not available while the computer is running in MS-DOS mode. For information on the standby and hibernate modes, see "Conserving Power" in the system Help.

External Universal Serial Bus (USB) keyboards only function when Windows 98 Second Edition is running. Use the integrated keyboard when you use the Dell Diagnostics.

1. Save and close any open files, exit any open application programs, and shut down the computer.
2. If the computer is docked, undock it.

   For instructions, see the *Port Replicator User's Guide*.
3. Turn on the computer.
4. Press <F2> when you see the Dell logo to access the system setup program.
5. Press the right-arrow key to highlight **Boot**.
6. Press the down-arrow key to highlight a device, and then press <F5> to move the device down the list or press <F6> to move the device up the list. Select the following boot sequence:

   - **Floppy**
   - **Internal Hard Drive**
   - **CD ROM/DVD**

7. Press <F10> to save your changes and exit the system setup program.
8. When the **Setup Confirmation** screen appears, press <Enter> to confirm that you want to save the configuration changes and exit the system setup program.

   The computer restarts automatically.
9. Insert the *System Software* CD into the CD-ROM or DVD-ROM drive.
10. Ensure that the diskette drive does not contain a diskette.
11. Shut down the computer.
12. Turn on the computer.

    The Dell Diagnostics begins automatically.

NOTES: You must turn off the computer and turn on the computer with the System Software CD in the CD-ROM or DVD-ROM drive module to use the Dell Diagnostics.

Do not run the Dell Diagnostics while Windows is running.

Before you read the rest of this section, you may want to start the Dell Diagnostics so that you can see it on your display.

When you start the diagnostics, the Dell™ logo screen appears, followed by a message telling you that the diagnostics is loading.

After the diagnostic utility loads, the **Diagnostics Menu** appears (see Figure 2-1).

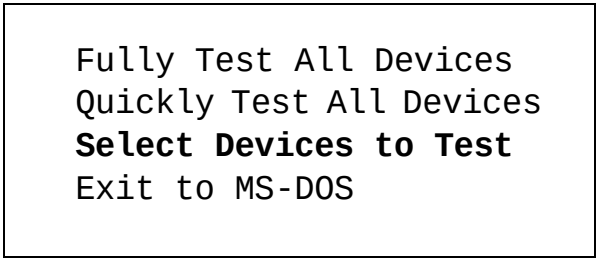


Figure 2-1. Diagnostics Menu

The menu allows you to choose to run all or specific diagnostic tests or to exit to the MS-DOS prompt. You can choose from the following options:

- **Fully Test All Devices** — This option thoroughly checks all computer components.
- **Quickly Test All Devices** — This option runs only the subtests that do not require your interaction. Dell recommends that you choose this option—you may be able to trace the problem quickly.

- **Select Devices to Test** — This option allows you to select particular components for testing.

To select an option from this menu, press the up- or down-arrow key to highlight the option and press <Enter>.

Dell Diagnostics Main Screen

When you select **Select Devices to Test** from the **Diagnostics Menu**, the main diagnostics screen appears (see Figure 2-2).

Information on the main screen of the diagnostics is presented in the following areas:

- Text at the top of the screen identifies the Dell Diagnostics version on your computer.
- On the left side of the screen, the **Device Groups** area lists the diagnostic test groups in the order they will run if you select **All** from the **Run tests** menu category. Press the up- or down-arrow key to highlight a device group.
- On the right side of the screen, the **Devices for Highlighted Group** area lists the currently detected hardware.
- The lines at the bottom of the screen show the menu choices. The first line lists the categories you can select; press the left- or right-arrow key to highlight a menu category. The last line gives information about the category currently highlighted.

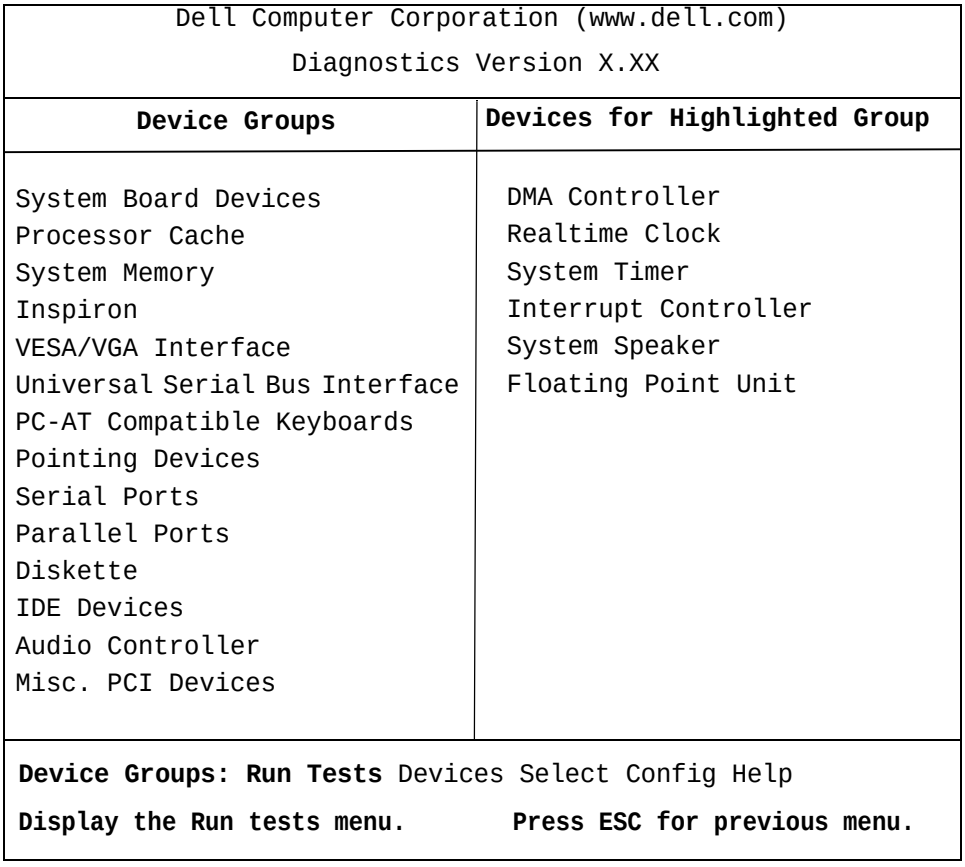


Figure 2-2. Dell Diagnostics Main Screen

Confirm the System Configuration Information

When you boot your computer from your *System Software* CD, the diagnostics displays a list of the computer devices and components in the **Device Groups** area on the main screen.

Do not be concerned if the **Device Groups** area does not list the names of all the components or devices connected to your computer. For example, you may not see a printer listed, although you know one is attached to your computer. If the printer is connected to the computer through the parallel port connector, you can test the printer connection with the **Parallel Ports** test.

Use the Dell Diagnostics Help Menu

Several comprehensive **Help** menus provide instructions on how to use the Dell Diagnostics. Each category explains the menu item, test group, subtest, and test and error results. To enter the **Help** menu, perform the following steps:

1. Press the up- or down-arrow key to highlight **Select Devices to Test** in the **Diagnostics Menu**.
2. Press <Enter>.
3. Press <h>.

The categories on the **Help** menu are **Menu**, **Keys**, **Device Group**, **Device**, **Test**, and **Versions**. The categories provide detailed descriptions of the devices that you are testing.

Menu

The **Menu** category provides descriptions of the main screen, the device groups, and the different diagnostic menus and commands as well as instructions on how to use them.

Keys

The **Keys** category explains the functions of all of the keystrokes available in the Dell Diagnostics.

Device Group

The **Device Group** category describes the test group that is presently highlighted in the **Device Groups** list on the main screen. For example, the following information appears when you select the **Device Group** category for **System Memory**:

```
System Memory

This module provides tests for system memory. The address
lines, data lines, and memory cells are tested for coupling
faults, opens, and shorts.
```

Device

The **Device** category is the educational section the Dell Diagnostics **Help**. It describes the function of the highlighted device in the **Device Groups** area. For example, the following information appears when you select the **Device** category for **System Memory**:

```
System Memory

System memory is the primary mechanism in a computer used for
storage of data. Because a computer works by manipulating data,
memory is vital for most operations performed by a computer.
```

Test

The **Test** category provides a thorough explanation of the test procedure of each subtest. For example, the following information appears when you select the **Test** category for **System Memory**:

```
System Memory Line Address Test

This test checks the system DRAM to find multiple “stuck-at” faults in address lines, decoder logic, and the memory cell array.
```

Versions

The **Versions** category lists the version numbers of the tests in the Dell Diagnostics.

Exit the Dell Diagnostics

1. Press <Esc> until the **Diagnostics Menu** appears (see Figure 2-1).
2. Press the down-arrow key to select **Exit to MS-DOS** and then press <Enter>.
3. Remove the *System Software* CD from the CD-ROM or DVD-ROM drive module.
4. When `X:\DIAGS` appears on your screen, press the power button until the computer turns off.
5. Restart your computer.

Dell recommends that you return the boot sequence back to the original configuration:

- **Floppy**
- **Internal Hard Drive**
- **CD ROM/DVD**

See “Start the Dell Diagnostics” found earlier in this chapter for instructions.

Troubleshooting Procedures

Before performing any of the procedures in this section, see “Checking the Basics” found earlier in this chapter and read the “Safety Instructions” at the front of this guide. Then perform the appropriate troubleshooting procedure.

*NOTE: Before you begin any of the troubleshooting procedures, ensure that **Quiet Boot** is set to **Disabled** in the **Main** menu of the system setup program. See Appendix B, “Using the System Setup Program,” for information on using the system setup program.*

Restart Your Computer

Several of the following sections advise you to restart the computer as part of the troubleshooting process. To perform a proper restart, perform the following steps:

1. Save and close any open files and exit any open application programs.
2. Click the **Start** button, click **Shut Down**, select **Restart**, and then click **OK**.

   The computer restarts automatically.

Dry Out a Wet Computer

Liquids, rain, and excessive humidity can cause damage to the computer.

CAUTION: Perform the following procedure only after you are certain that it is safe to do so. If the computer is connected to an electrical outlet, Dell recommends that you turn off AC power at the circuit breaker before attempting to remove the power cables from the electrical outlet. Use the utmost caution when removing wet cables from a live power source.

1. Turn off the computer and disconnect the AC adapter from the computer.
2. Disconnect the AC adapter from the electrical outlet.
3. Turn off any attached peripherals and disconnect them from their power sources and then from the computer.
4. Ground yourself by touching one of the metal connectors on the back of the computer.
5. Remove the media bay device and PC Cards (if installed.)

   Put the device and cards in a safe place to dry.
6. Remove the batteries from the battery bay and the media bay.

   Wipe off each battery and put them in a safe place to dry.
7. Remove the hard-disk drive.

   For instructions, refer to "Installing an Internal Hard-Disk Drive" in Chapter 1.
8. Remove the memory modules.

   For instructions, refer to "Installing Memory Modules" in Chapter 1.
9. Open the display, and place the computer right-side up across two books or similar props to let air circulate all around it.

   Let the computer dry for at least 24 hours in a dry area at room temperature.

NOTICE: Do not use artificial means to speed up the drying process.

CAUTION: To help prevent electrical shock, verify that the computer is thoroughly dry before continuing with the remainder of this procedure.

10. Ground yourself by touching one of the unpainted metal connectors on the back of the computer.
11. Replace the memory modules.

CAUTION: To help prevent electrical shock, verify that the computer is thoroughly dry before continuing with the remainder of this procedure.

12. Replace the memory module cover and screw.
13. Replace the hard-disk drive and screw.
14. Replace the media bay device and PC Cards.
15. Replace the batteries.
16. Connect the peripherals to the computer.
17. Connect the computer and peripherals to an electrical outlet.
18. Turn on the computer and the peripherals.
19. Press <Esc> twice.

    The Boot Menu appears.
20. Select **CD ROM/DVD** and press <Enter>.

If you cannot identify the damaged components, call Dell for technical assistance. For instructions, refer to Chapter 4, "Getting Help,"

Test a Dropped or Damaged Computer

1. Save and close any open files, exit any open application programs, and shut down the computer.
2. Remove the battery.
3. Disconnect the AC adapter from the computer and then disconnect the AC adapter from the electrical outlet.
4. Turn off any attached peripherals and disconnect them from the electrical outlet and then from the computer.
5. Ground yourself by touching one of the metal connectors on the back of the computer.
6. Remove the media bay device.
7. Remove the hard-disk drive.

   For instructions, refer to "Installing an Internal Hard-Disk Drive" in Chapter 1.

8. Remove the memory module cover and the memory modules.

   For instructions, refer to "Installing Memory Modules" in Chapter 1.

9. Replace the memory modules.
10. Replace the memory module cover and screw.
11. Replace the hard-disk drive.
12. Ensure that the PC Cards are properly seated in the PC Card connectors.
13. Replace the battery.
14. Connect the peripherals to the computer.
15. Connect the computer and peripherals to the electrical outlet.

NOTE: Do not dock the computer at this time.

16. Insert the *System Software* CD into the CD-ROM or DVD-ROM drive.
17. Ensure that the diskette drive does not contain a diskette.
18. Turn on the computer.

    The Dell Diagnostics loads automatically.

19. Select **Fully Test All Devices**.

    See "Running the Dell Diagnostics" found earlier in this chapter for more information.

If the computer does not operate properly, make a copy of and complete the Diagnostics Checklist (see Figure 4-1). Then call Dell for technical assistance. See Chapter 4, "Getting Help," for instructions.

Recover From a Program That Is Not Responding

1. Press <Ctrl><Alt><Delete>.

   The **Close Program** window appears.

2. Click the program that no longer responds.
3. Click **End Task**.

Restart a Computer That Is Not Responding

1. Press and hold the power button until the computer turns off.
2. To turn on the computer, press the power button.

   ScanDisk, a program that checks for and repairs errors on the hard-disk drive, may run during the boot process. Windows loads and runs after the scan completes.

Resolve Audio Problems

- Use the volume control buttons on the left side of the computer to adjust the volume.
- Run the **Audio Controller** test as described in "Running the Dell Diagnostics" found earlier in this chapter.

If you still have an audio problem, call Dell for technical assistance. See Chapter 4, "Getting Help," for instructions.

Resolve CD-ROM or DVD-ROM Drive Problems

NOTE: Inconsistencies in the manufacturing of CD-ROM media may cause some high speed CD-ROM drives to vibrate more than others. This vibration and the associated noise does not indicate a defect in the drive or the CD.

- Double-click the **My Computer** icon on your desktop and verify that the drive is recognized by the operating system. Most of the common boot sector viruses cause the CD-ROM or DVD-ROM drive to "disappear." Use the virus-scanning software to check for and remove viruses.
- Clean the disc using a commercially available cleaning kit.
- Clean the drive using a commercially available cleaning kit.
- Try another CD or DVD.

NOTE: Because of different DVD file types currently used in the industry, not all DVD titles work in all DVD-ROM drives.

- Enter the system setup program as described in Appendix B, "Using the System Setup Program," and verify that **IDE Controller** is set to **Both**.
- Run the **IDE Devices** tests as described in "Running the Dell Diagnostics" found earlier in this chapter.
- Turn off the computer and remove the CD-ROM or DVD-ROM drive from the media bay. Replace the drive and turn on the computer.

If you still have a CD-ROM or DVD-ROM drive problem, call Dell for technical assistance. See Chapter 4, "Getting Help," for instructions.

Resolve Diskette Drive Problems

- Ensure that the diskette is not write-protected if you are trying to copy data to it.
- Try a different diskette in the drive. If the new diskette works, the original diskette may be defective.
- Check the settings on the **Diskette Options** submenu of the system setup program as described in Appendix B, "Using the System Setup Program."
- Run the **Diskette** tests as described in "Running the Dell Diagnostics" found earlier in this chapter.
- Clean the drive using a commercially available cleaning kit.
- Restart the computer.

If you still have a diskette drive problem, call Dell for technical assistance. See Chapter 4, "Getting Help," for instructions.

NOTICE: Do not attempt to clean drive heads with a swab. You could accidentally misalign the heads and render the drive inoperable.

Resolve Display Problems

- If the display is blank, the computer may be in standby or hibernate (save-to-disk suspend) mode. To resume normal operations, press the power button.
- Check the **Video Display Device** setting in the system setup program as described in Appendix B, "Using the System Setup Program." To use the integrated display on the computer, this option must be set to **LCD Mode** or **Simul Mode**.

NOTE: The operating system overrides the settings in the system setup program if the computer is in MS-DOS mode.

- Adjust brightness setting.
- Run the **VESA/VGA Interface** tests as described in "Running the Dell Diagnostics" found earlier in this chapter.
- Restart the computer.

If you still have a display problem, call Dell for technical assistance. See Chapter 4, "Getting Help," for instructions.

Resolve External Monitor Problems

- If the display is blank, the computer may be in standby or hibernate (save-to-disk suspend) mode. To resume normal operations, press the power button.
- Ensure that the video cable is firmly attached to the video connector on the back of the computer and that the monitor power cable is plugged into a functional electrical outlet.
- Check the **Video Display Device** setting in the system setup program as described in Appendix B, "Using the System Setup Program." To use an external monitor, this option must be set to **CRT Mode** or **Simul Mode**.

NOTE: The operating system overrides the settings in the system setup program if the computer is in MS-DOS mode.

- Adjust brightness and contrast settings.
- Run the **VESA/VGA Interface** tests as described in "Running the Dell Diagnostics" found earlier in this chapter.
- Restart the computer.

If you still have an external monitor problem, call Dell for technical assistance. See Chapter 4, "Getting Help," for instructions.

NOTE: If your computer is connected to the TV-out connector on your television and there is no picture on your television screen, see "Resolve Television Problems" found later in this chapter.

Resolve External Keyboard Problems

NOTE: External Universal Serial Bus (USB) keyboards only function when Windows 98 Second Edition is running. Use the integrated keyboard when you use the Dell Diagnostics, the system setup program, or you are working in the MS-DOS mode.

- Disconnect the keyboard cable from the computer and check the cable connector for bent or broken pins.
- Run the **PC-AT Compatible Keyboards** tests as described in "Running the Dell Diagnostics" found earlier in this chapter.
- Restart the computer.

If you still have a an external keyboard problem, call Dell for technical assistance. See Chapter 4, "Getting Help," for instructions.

Resolve Hard-Disk Drive Problems

- Run the ScanDisk utility: click the **Start** button, point to **Programs—> Accessories—> System Tools**, and then click **ScanDisk**.
- Run the **IDE Devices** tests as described in "Running the Dell Diagnostics" found earlier in this chapter.
- Check the setting on the **IDE Controller** submenu of the system setup program as described in Appendix B, "Using the System Setup Program."

If you still have a hard-disk drive problem, call Dell for technical assistance. See Chapter 4, "Getting Help," for instructions.

Resolve Hardware Conflicts

Hardware conflicts occur if the device is detected by the operating system but is configured incorrectly. To check for conflicts, perform the following steps:

1. Click the **Start** button, point to **Settings**, and click **Control Panel**.
2. In the **Control Panel**, double-click **System**.
3. Click the **Device Manager** tab.

   Conflicts are indicated in the **Device Manager** list by a yellow exclamation point (**!**) beside the conflicting device. A red X beside a device indicates that the device is disabled in the current hardware profile.

   If a hardware conflict exists, the **Device status** area in the **Properties** window shows the conflicting expansion cards or devices.

To resolve conflicts, you can use the Windows Hardware Conflict Troubleshooter.

1. Click the **Start** button and then click **Help**.
2. Click the **Contents** tab and then double-click **Troubleshooting**.
3. Double-click **If you have a hardware conflict** and follow the instructions on the screen.

Resolve Infrared Port Problems

To configure the infrared port, perform the following steps:

1. Click the **Start** button, click **Settings**, and then click **Control Panel**.
2. Double-click the **System** icon.
3. Click the **Device Manager** tab.
4. If you previously attempted to configure the infrared port, remove all device listings that refer to **Infrared** or **Virtual Devices** in the following categories:

   - **Infrared devices**
   - **Network adapters**
   - **Ports (COM & LPT)**

   Click the entry you wish to remove and then click **Remove**.
5. If you remove a device, when prompted, ensure that **Yes, I want to restart my computer now** is selected, and then click **Finish**.

   The computer restarts automatically.

*NOTE: If you have not attempted to configure the infrared port, the infrared and virtual entries will not be listed in the **Device Manager**. If you do not need to remove a device, restart the computer and continue with the next step.*

6. When you see the Dell logo, press <F2> to enter the system setup program.
7. Press the right-arrow key to highlight the **System Devices** menu item.
8. Press the down-arrow key to highlight **Infrared Port** and then press <F5> to change the setting to **Customized**.
9. Press the down-arrow key to highlight **Mode** and press <F5> to change the setting to **SIR** or **FIR**. Refer to the documentation of the infrared device that you are trying to communicate with to determine the correct setting.

   If you set the **Mode** setting to **SIN**, the **Base I/O address/IRQ** setting automatically changes to **2F8 IRQ3**.

   If you set the **Mode** setting to **FIR**, the **Base I/O address/IRQ** setting automatically changes to **2F8 IRQ3** and the **DMA channel** setting changes to **0**.

*NOTE: If the **SIR** or **FIR** setting causes a conflict with another device, a yellow asterisk appears to the right of the **Infrared Port** setting. To resolve the conflict, press the <F5> or <F6> key to select another* **Base I/O address/IRQ** *or* **DMA** *setting.*

10. Press <F10> to save your changes and exit the system setup program.
11. When the **Setup Confirmation** screen appears, press <Enter> to confirm that you want to save the configuration changes and exit the system setup program.

    The computer restarts automatically. During the restart, the infrared hardware is detected by the operating system.
12. In the **Systems Settings Change** window, click **Yes** to restart the computer.
13. Click the **Start** button, point to **Settings**, and then click **Control Panel**.
14. Double-click the **Infrared** icon.
15. Click the **Options** tab.
16. Ensure that the following options are checked:
    - **Enable infrared communication.**
    - **Search for and provide status for devices within range.**
    - **Install software for Plug and Play devices within range.**
17. Click **Apply** and then click **OK**.
18. Try communicating with your external infrared device.

If you still have an infrared port problem, call Dell for technical assistance. See Chapter 4, "Getting Help," for instructions.

Resolve Memory Problems

- If an insufficient memory message appears, save and close any open files and exit any open application programs not in use.
- Consider installing additional system memory.
- Run the **System Memory** test as described in "Running the Dell Diagnostics" found earlier in this chapter.
- Reseat the memory modules. Refer to "Installing Memory Modules" in Chapter 1.
- Restart the computer.

If you still have a memory problem, call Dell for technical assistance. See Chapter 4, "Getting Help," for instructions.

*NOTE: When you install additional memory and restart your computer, a **Warning** dialog box appears on your screen stating that you must recreate the hibernate file. To recreate the hibernate file, see "Recreating the Hibernate (Save-to-Disk Suspend) File" in Chapter 3.*

Resolve Modem, Fax, and Internet Connection Problems

NOTICE: Connect the modem to an analog line only. Connecting your modem to a nonanalog line, such as a digital or private branch exchange (PBX) line, will cause damage.

NOTE: If you can connect to your Internet service provider (ISP) and send or receive a fax, your modem is functioning properly. If you are sure that your modem is working properly and you still experience problems connecting to your ISP, contact the ISP technical support department for assistance.

- Ensure that you have touchtone telephone service.
- If you have call-waiting service, disable call-waiting. Refer to your local telephone directory or call your telephone service provider for information on temporarily disabling call-waiting.
- If you have voice mail service, you may hear an irregular dial tone when you have messages. Contact your telephone service provider for information on restoring a normal dial tone.
- If you have any other telephone devices plugged into this line, such as answering machines, dedicated fax machines, or line splitters, bypass them and plug the modem cable directly into the telephone connector on the wall.
- Reseat the cable connections.
- Try a different cable; if you are using a cable that is 10 feet or more in length, try a shorter one.
- Disconnect the cable from the modem and plug it directly into a telephone. Listen for a dial tone.
- Line noise can cause low connection speeds. If you have persistent problems, try connecting the modem to a different telephone connector. You may also wish to contact your telephone company to report the problem.

If you still have problems with a Dell-provided modem, call Dell for technical assistance. See Chapter 4, "Getting Help," for instructions. If you have problems with a non-Dell-provided modem, call the modem manufacturer.

Resolve PC Card Problems

- Ensure that the PC Card is properly inserted into the connector.
- Ensure that the card is recognized by the Windows operating system:
  1. Click the **Start** button, point to **Settings**, and then click **Control Panel**.
  2. Double-click the **PC Card (PCMCIA)** icon.
  3. Ensure that the card is listed in the **PC Card (PCMCIA) Properties** window.

If you still have problems with a Dell-provided PC Card, call Dell for technical assistance. See Chapter 4, "Getting Help," for instructions. If you have problems with a non-Dell-provided PC Card, call the card manufacturer.

Resolve Software Problems

Software problems can result from the following circumstances:

- Improper installation or configuration of an application program
- Input errors
- Drivers that may conflict with certain application programs
- Memory conflicts

You can confirm that a problem is software-related by running the **System Board Devices** tests as described in "Running the Dell Diagnostics" found earlier in this chapter. If all tests in the device group run successfully, the error condition may be related to a software problem.

NOTE: For detailed troubleshooting information on a particular application program, see the software documentation or contact the software manufacturer.

Install and Configure Software

Before installing additional software, ensure that the application program is compatible with Microsoft Windows 98 Second Edition or Microsoft Windows 2000 (depending on the operating system software installed in your computer) and that your computer meets the minimum hardware requirements needed to run the software.

Before installing software on your hard-disk drive, use a virus-scanning application program to check the diskettes or CDs for viruses. Viruses can quickly use all available system memory, damage and/or destroy data stored on the hard-disk drive, and permanently affect the performance of the application programs they infect.

Software usually includes installation instructions in its accompanying documentation and a software setup program (usually called **setup.exe** or **install.exe**,) on a diskette or CD.

Resolve Touch Pad and Mouse Problems

- If you are using a PS/2 or USB mouse, ensure that the connector is firmly attached.
- If you are using the touch pad or a PS/2 mouse, run the **Pointing Devices** test as described in "Running the Dell Diagnostics" found earlier in this chapter.
- Reinstall the touch pad driver. For instructions, see "Install the Touch Pad Driver" in Chapter 3.

NOTE: Be sure to refer to the section specific to your operating system.

- Restart the computer.

If you still have a touch pad or mouse problem, call Dell for technical assistance. See Chapter 4, "Getting Help," for instructions.

Resolve Television Problems

If your television is connected to the TV-out connector on your computer and there is no picture on your television screen, verify the following connections and settings:

- A composite video cable is connected to the S-video connector on your television and the TV-out connector on your computer.

NOTE: If your television did not come with a composite video cable, you can purchase one from a local electronics store.

- **Television Type** in the system setup program is set to the correct video standard for your country.
- **Television Port** is **Enabled** in the system setup program.

Check the Television Type Setting

1. Save and close any open files, and exit any open application programs.
2. Shut down your computer.
3. Connect a composite video cable to the TV-out connector on your computer and the S-video connector on your television.
4. Turn on your television.
5. Restart your computer.
6. Click the **Start** button, point to **Settings**, and click **Control Panel**.
7. Double-click the **Display** icon**.**
8. Click the **Settings** tab.
9. Click the **Advanced** button.
10. Click the **TV** button.
11. Set the television type to **NTSC** (US) or **PAL** (Europe).

Check the System Setup Program Settings

1. Click the **Start** button, and select **Shut Down**.
2. In the **Shut Down** window, select **Restart the Computer**.
3. Click **Yes**.

   Your computer shuts down and restarts.
4. When you see the Dell logo, press <F2> to enter the system setup program.

   The system setup program screen appears.
5. Press the right- or left-arrow key to select the **Main** menu.

6. Press the down-arrow key to scroll down to **Television Type**.

   Either **NTSC** or **PAL** is highlighted.

7. To change your selection, press <F6>.

NOTE: The function key tasks may be different for your particular system setup program. Be sure to check the function key menu at the bottom of your system setup screen.

8. To save your selection, press <F10>.

   The **Setup Confirmation** window appears.

9. Select **Yes** and press <Enter>.

   The computer shuts down and restarts.

NOTE: For more information on connecting a television to your computer, see "Connecting External Devices" in the Dell Inspiron 5000 System Help.

CHAPTER 3
Installing System Software

This chapter explains how to reinstall the Microsoft Windows 98 Second Edition operating system as well as the Dell-provided device drivers and utilities for both Windows 98 Second Edition and Microsoft Windows 2000. You may need to refer to this chapter under the following conditions:

- You are reinstalling the Microsoft Windows 98 Second Edition operating system.
- You are reinstalling the Dell-provided drivers and utilities.
- You installed a new primary hard-disk drive and you must install all of the system software.

Installing the Windows 98 Operating System

Perform the following steps to install Windows 98 Second Edition on the hard-disk drive before you install any device drivers or utilities:

1. Insert the *Microsoft Boot Disk Windows 98 Series* diskette into the diskette drive.
2. Turn on the computer.
3. When the **Microsoft Windows 98 Startup** menu appears, insert the *Microsoft Windows 98* CD into the CD-ROM or DVD-ROM drive.
4. Select **Start Windows 98 Setup from CD-ROM** and press <Enter>.

   The system setup program runs ScanDisk to check your hard-disk drive.
5. When the hard-disk drive check is complete, type x to exit ScanDisk.
6. Follow the instructions on the screen to continue with the installation.
7. When prompted to create a start-up diskette, remove the *Microsoft Boot Disk Windows 98 Series* diskette, and click **Next>**.

8. Label a blank, high-density diskette as instructed, insert the diskette into the diskette drive, and then click **OK**.

9. Follow the instructions on the screen to complete the installation.

Recreating the Hibernate (Save-to-Disk Suspend) File (Windows 98)

When the hibernate mode is activated, all system data is stored in the hibernate (save-to-disk suspend) file on your hard-disk drive. The hibernate file on your hard-disk drive cannot be accessed by the Windows operating system or application programs.

You must recreate the hibernate file if you perform any of the following actions:

- Delete the hibernate file
- Install a new hard-disk drive
- Reformat your hard-disk drive
- Install additional memory

NOTE: If you install additional memory, you must delete the hibernate file before you recreate the file.

Boot Your Computer With the System Software CD

1. Save and close any open files, exit any open application programs, and shut down the computer.

2. If the computer is docked, undock it.

   For instructions, see the *Port Replicator User's Guide*.

3. Turn on the computer.

4. Press <F2> when you see the Dell logo to access the system setup program.

5. Press the right-arrow key to highlight **Boot**.

6. Press the down-arrow key to highlight a device, and then press <F5> to move the device down the list or press <F6> to move the device up the list. Select the following boot sequence:

   - **Floppy**
   - **CD ROM/DVD**
   - **Internal Hard Drive**

7. Insert the *System Software* CD into the CD-ROM or DVD-ROM drive.

8. Press <F10> to save your changes and exit the system setup program.

9. When the **Setup Confirmation** screen appears, press <Enter> to confirm that you want to save the configuration changes and exit the system setup program.

   The computer restarts automatically.

   The Dell Diagnostics begins automatically.

   After the diagnostic utility loads, the **Diagnostics Menu** appears (see Figure 3-1).

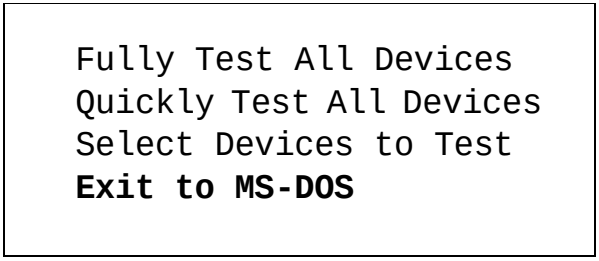


Figure 3-1. Diagnostics Menu

10. Press the down-arrow key to select **Exit to MS-DOS** and then press <Enter>.

    For instructions on deleting and creating the hibernate file, refer to the following sections.

Delete the Hibernate File

1. Boot your computer from the CD-ROM or DVD-ROM drive with the *System Software* CD in the CD-ROM or DVD-ROM drive.

   For instructions, refer to the preceding section, "Boot Your Computer With the System Software CD."

2. At the `R:\DIAGS` prompt, type `cd\` and press <Enter>.

3. At the `R:\` prompt, type `cd\UTILITY` and press <Enter>.

4. Type `phdisk /delete /file` and press <Enter>.

   NOTE: You must type a space between `phdisk` *and* `/delete` *and* `/file`*.*

5. Follow the instructions on your screen to delete the hibernate file.

   The computer automatically restarts.

To create a new hibernate file immediately after deleting it, perform the following steps:

1. When the **Diagnostics Menu** appears, press the down-arrow key to select **Exit to MS-DOS** and then press <Enter>.

2. Complete steps 2 through 6 in the next section, "Create the Hibernate File."

Create the Hibernate File

1. Boot your computer from the CD-ROM or DVD-ROM drive with the *System Software* CD in the CD-ROM or DVD-ROM drive.

   For instructions, refer to the preceding section, "Boot Your Computer With the System Software CD."

2. Exit to **MS-DOS** from the **Dell Diagnostic Menu**.

3. At the `R:\DIAGS` prompt, type `cd\` and then press <Enter>.

4. At the `R:\` prompt, type `cd\WIN98\UTILITY` and press <Enter>.

5. Type `phdisk /create /file` and press <Enter>.

6. At the `R:\WIN98\UTILITY` prompt, type `phdisk /info` and press <Enter>.

NOTES: You must type a space between `phdisk` *and* `/create` *and* `/file`.

The utility calculates the size of the file, in kilobytes, based on the amount of system memory in your computer, plus the amount of video memory in your computer, plus 2 MB to handle additional system requirements.

7. Follow the instructions on your screen to create the hibernate file.

8. When the Dell logo appears on your screen, remove the *System Software* CD from the CD-ROM or DVD-ROM drive.

   Windows automatically starts and runs. After you create the hibernate file, you must enable hibernate support in Windows 98 Second Edition.

Enable Hibernate Support

1. Click the **Start** button, point to **Settings**, and click **Control Panel**.

2. Double-click the **Power Management** icon.

3. Click the **Hibernate** tab.

4. Ensure that **Enable hibernate support** is selected and click **Apply**.

5. Click **OK** to close the Control Panel.

View the Hibernate File Information

1. Exit to **MS-DOS** from the **Dell Diagnostics Menu**.

2. At the `R:\DIAGS` prompt, type `cd\` and then press <Enter>.

3. At the `R:\` prompt, type `cd\WIN98\UTILITY` and press <Enter>.

4. At the `R:\WIN98\UTILITY` prompt, type `phdisk /info`.

NOTE: You must type a space between `phdisk` *and* `/info`.

Installing Drivers and Utilities for Windows 98

To install the system software, you need the following items:

- CD-ROM or DVD-ROM drive installed in the media bay of the computer
- *System Software* CD
- *Dell Inspiron 5000 Software DVD Decoder* CD
- *Microsoft Windows 98 Second Edition* CD
- *Microsoft Boot Disk Windows 98 Series* diskette

NOTES: Verify that Windows 98 is already installed on the hard-disk drive before you install any device drivers. To install Windows 98 Second Edition, refer to "Installing the Windows 98 Operating System" found earlier in this chapter.

The drivers on the System Software CD are the same files that Dell installed on your hard-disk drive before shipping the computer to you. To download the latest versions of these drivers, visit the Dell support Web site at ***http://support.dell.com****.*

Install the Audio Driver (Windows 98)

The audio driver allows you to customize the sound features of your computer.

1. Save and close any open files, and exit any open application programs.
2. Insert the *System Software* CD into the CD-ROM or DVD-ROM drive.
3. Click the **Start** button, and then click **Run**.
4. In the **Run** dialog box, type `x:\win98\audio\setup.exe`, where *x* is the CD-ROM or DVD-ROM drive letter.

   The CD-ROM or DVD-ROM drive letter is usually *D*.
5. Click **OK**.
6. In the **Welcome** window, click **Next>**.
7. In the **Main Menu**, **Upgrade Drivers** is selected. Click **Next>**.

   The audio files are copied to your hard-disk drive.
8. When prompted, ensure that **Yes, I want to restart my computer now** is selected, and then click **Finish**.

NOTE: If the computer is set to boot from the CD-ROM or DVD-ROM drive before the hard-disk drive, remove the System Software CD before the computer restarts so that the computer does not boot from the CD. For information on changing the boot sequence, refer to Appendix B, "Using the System Setup Program."

The **New Hardware Found** window appears, the software for the hardware is installed, and the installation is complete.

Install the Video Driver (Windows 98)

The video driver controls video resolution and color palette.

NOTE: If you need to use extended video modes, check the documentation that accompanied the application program to determine if the driver is provided. If it is not, contact the software manufacturer for the necessary driver.

1. Save and close any open files, and exit any open application programs.
2. Insert the *System Software* CD into the CD-ROM or DVD-ROM drive.
3. Click the **Start** button, and then click **Run**.
4. In the **Run** dialog box, type *x*`:\win98\video\setup.exe`, where *x* is the CD-ROM or DVD-ROM drive.

   The CD-ROM or DVD-ROM drive letter is usually *D*.
5. In the **Setup Complete** window, ensure that **Yes, I want to restart my computer now.** is selected, and then click **Finish**.

   The computer restarts automatically.

NOTES: If the computer is set to boot from the CD-ROM or DVD-ROM drive before the hard-disk drive, remove the System Software CD before the computer restarts so that the computer does not boot from the CD. For information on changing the boot sequence, refer to Appendix B, "Using the System Setup Program."

After the computer restarts, you can change the video resolution.

Install the Touch Pad Driver (Windows 98)

The touch pad driver controls touch pad and mouse functions.

NOTE: When you are prompted to select a directory, Dell recommends using the default directory settings.

1. Save and close any open files, and exit any open application programs.
2. Insert the *System Software* CD into the CD-ROM or DVD-ROM drive.
3. Click the **Start** button, and then click **Run**.
4. In the **Run** dialog box, type *x*`:\win98\touchpad\english\setup.exe`, where *x* is the CD-ROM or DVD-ROM drive letter.

   If you are using a Japanese-language version of Windows, type *x*`:\touchpad\japanese\setup.exe`, where *x* is the CD-ROM or DVD-ROM drive letter.

The CD-ROM or DVD-ROM drive letter is usually *D*.

NOTICE: Do not install the Japanese-language driver on a computer with a non-Japanese-language operating system.

5. Click **OK**.
6. In the **Welcome** window, click **Next>**.

   At the **Choose Destination Location** window, click **Next>**.
7. At the **Start Copying Files** window, click **Next>**.

   The touch pad drivers are copied to your hard-disk drive.
8. At the **Setup Complete** window, be sure that the **Yes, I want to restart my computer now** button is selected, and then click **Finish**.

NOTE: If the computer is set to boot from the CD-ROM or DVD-ROM drive before the hard-disk drive, remove the System Software CD before the computer restarts so that the computer does not boot from the CD. For information on changing the boot sequence, refer to Appendix B, "Using the System Setup Program."

The **Information about your Touch Pad** window appears. If you do no want this window to appear each time you start the computer, uncheck the box that says **Show this message the next time Windows starts**. Then click **Close**.

Install Softex BayManager (Windows 98)

Softex BayManager is a utility that makes it possible to swap media bay devices without turning off the computer.

NOTICE: You must uninstall Softex BayManager before you download and install a Softex BayManager software upgrade from the support Web site File Library.

To uninstall Softex BayManager, perform the following steps:

1. Save and close any open files, and exit any open application programs.
2. Click the **Start** button, point to **Settings**, and click **Control Panel**.
3. Double-click **Add/Remove Programs**.
4. Select **Softex BayManager** and click **Add/Remove**.
5. Follow the instructions on the screen to complete the uninstall process.

To install the Softex BayManager software from the *System Software* CD, perform the following steps:

1. Insert the *System Software* CD into the CD-ROM or DVD-ROM drive.
2. Click the **Start** button, and then click **Run**.

3. In the **Run** dialog box, type *x*`:\win98\baymgr\setup.exe`, where *x* is the CD-ROM or DVD-ROM drive letter.

   The CD-ROM or DVD-ROM drive letter is usually *D*.

4. Click **OK**.

5. In the **Welcome** window, click **Next>**.

6. At the **Setup Complete** window, ensure that the **Yes, I want to restart my computer now** is selected, and then click **Finish**.

NOTE: If the computer is set to boot from the CD-ROM or DVD-ROM drive before the hard-disk drive, remove the System Software CD before the computer restarts so that the computer does not boot from the CD. For information on changing the boot sequence, refer to Appendix B, "Using the System Setup Program."

Install the Internal Modem Driver (Windows 98) (Optional)

NOTICE: Do not use this modem driver with a PC Card modem. The modem driver on the *System Software* CD is compatible only with the optional internal modem.

If your computer has an internal modem, perform the following steps to install the driver:

1. Save and close any open files, and exit any open application programs.

2. Insert the *System Software* CD into the CD-ROM or DVD-ROM drive.

3. Click the **Start** button, and then click **Run**.

4. In the **Run** dialog box, type *x*`:\win98\modem\setup.exe`, where *x* is the CD-ROM or DVD-ROM drive letter.

   The CD-ROM or DVD-ROM drive letter is usually *D*.

5. Click **OK**.

6. In the **Welcome** window, click **Next>**.

   The **New Hardware Found** window appears, the software for the modem is installed, and the installation is complete.

Install the Software DVD Decoder (Windows 98) (Optional)

The DVD decoder driver allows you to play DVD movies using your DVD-ROM drive on the computer.

NOTE: When you are prompted to select a directory, Dell recommends that you use the default directory setting.

1. Insert the *Dell Inspiron 5000 Software DVD Decoder* CD into the DVD-ROM drive.
2. Click the **Start** button, and then click **Run**.
3. In the **Run** dialog box, type *x*`:\win98\setup.exe`, where *x* is the DVD-ROM drive letter.

   The DVD-ROM drive letter is usually *D*.
4. Click **OK**.

   The **Welcome** window appears.
5. Click **Next>**.
6. In the **Choose Destination Location** window, click **Next>**.
7. In the **Select Program Folder** window, click **Next>**.
8. In the **Start Copying Files** window, click **Next>**.
9. In the **Setup Complete** window, ensure that the **Yes, I want to restart my computer now** is selected, and then click **Finish**.
10. Insert your DVD into the DVD-ROM drive.

    The first time you insert a DVD into your DVD-ROM drive, a **Warning** dialog box appears, explaining that DVD playback performance is dependent on your overall system configuration and that some DVD titles are protected with an antitaping product provided by Macrovision, Inc.

NOTES: A variety of factors determine the DVD's playback performance. For more information, read the "Requirements" section in the release notes that came with your DVD software.

The Macrovision product allows you to view your DVD on most televisions, but it distorts the video image if played back from a videotape. The DVD decoder software provided with your system does not allow you to play back DVDs with graphics cards that contain a TV-out connector.

If you have a TV-out connector on your computer and your DVD-ROM drive does not play your DVD title, make sure the TV-out feature in your graphics card's software is turned off. Dell does not currently provide a TV-out connector as an accessory item.

11. Click **OK**.

Configuring the Television Control Panel Setting

1. Click the **Start** button and select **Settings —> Control Panel**.
2. In the **Control Panel** window, click the **Display** icon.
3. In the **Display Properties** window, click the **Settings** tab.
4. Click the **Advanced** button.
5. In the **Multiple Monitors** window, click the **Displays** tab.
6. In the **TV** section, click the **Primary** button.
7. Click **OK**.

   The **Display Properties** window appears.
8. Click **OK**.
9. Close the **Control Panel** window.

*NOTE: The DVD-ROM drive displays a DVD movie on the Primary display. To view the DVD on the television screen, set the **TV** display to **Primary.***

Setting and Changing the DVD-ROM Drive Region Code

If you reinstall the DVD decoder software, you must set the DVD-ROM drive region code before you can play a movie. The region code can be reset if you relocate to another region.

NOTICE: You should reset the region code only when absolutely necessary. You can reset the region code up to four times.

To reset the drive region code, perform the following steps:

1. Insert a DVD coded for the new region into the DVD-ROM drive.

   A notification box appears, explaining that the disc belongs to another region and cannot be played. The notification also explains how to reset the region setting.
2. Follow the instructions on the screen to change the region setting.

Install the Intel® SpeedStep™ Utility (Windows 98) (Optional)

NOTICE: Do not install the Intel SpeedStep utility unless your computer has a Mobile Intel Pentium® III processor with SpeedStep technology. To determine if your computer has a Mobile Intel Pentium III processor with SpeedStep technology, check for the Intel SpeedStep item in the Power menu of the system setup program. For instructions on using the system setup program, refer to Appendix B, "Using the System Setup Program."

If your computer has a Mobile Intel Pentium III processor with Intel SpeedStep technology, you must reinstall the Intel SpeedStep utility after you install a new hard-disk drive or reformat your hard-disk drive.

1. Save and close any open files, and exit any open application programs.
2. Insert the *System Software* CD into the CD-ROM or DVD-ROM drive.
3. Click the **Start** button, and then click **Run**.
4. In the **Run** dialog box, type `x:\win98\spd_stp\setup.exe`, where *x* is the CD-ROM or DVD-ROM drive letter.

   The CD-ROM or DVD-ROM drive letter is usually *D*.
5. Click **OK**.
6. In the **Welcome** window, click **Next>**.
7. At the **Setup Complete** window, ensure that the **Yes, I want to restart my computer now** is selected, and then click **Finish**.

Installing Drivers and Utilities for Windows 2000

To install the system software, you need the following items:

- *System Software* CD
- CD-ROM or DVD-ROM drive installed in the media bay of the computer

NOTE: The drivers on the System Software CD are the same files that Dell installed on your hard-disk drive before shipping the computer to you. To download the latest versions of these drivers, visit the Dell support Web site at ***http://support.dell.com***.

Install the Audio Driver (Windows 2000)

The audio driver allows you to customize the sound features of your computer.

1. Save and close any open files, and exit any open application programs.
2. Insert the *System Software* CD into the CD-ROM or DVD-ROM drive.
3. Click the **Start** button, and then click **Run**.
4. In the **Run** dialog box, type `x:\win2000\audio\setup.exe`, where *x* is the CD-ROM or DVD-ROM drive letter.

   The CD-ROM or DVD-ROM drive letter is usually *D*.
5. Click **OK**.

6. In the **Welcome** window, click **Next>**.

   An information dialog box appears, stating that the audio driver is installed on your computer.

7. Click **OK**.

8. When prompted, ensure that **Yes, I want to restart my computer now** is selected, and then click **Finish**.

NOTE: If the computer is set to boot from the CD-ROM or DVD-ROM drive before the hard-disk drive, remove the System Software CD before the computer restarts so that the computer does not boot from the CD. For information on changing the boot sequence, refer to Appendix B, "Using the System Setup Program."

The audio drivers are installed, and the installation is complete.

Install the Video Driver (Windows 2000)

The video driver controls video resolution and the color palette.

NOTE: If you need to use extended video modes, check the documentation that accompanied the application program to determine if the driver is provided. If it is not, contact the software manufacturer for the necessary driver.

1. Save and close any open files, and exit any open application programs.

2. Insert the *System Software* CD into the CD-ROM or DVD-ROM drive.

3. Click the **Start** button, and then click **Run**.

4. In the **Run** dialog box, type `x:\win2000\video\setup.exe`, where *x* is the CD-ROM or DVD-ROM drive.

   The CD-ROM or DVD-ROM drive letter is usually *D*.

5. In the **Choose Setup Language** window, select **U.S. English**, and then click **OK**.

6. In the **Setup Complete** window, ensure that **Yes, I want to restart my computer now** is selected, and then click **Finish**.

   The computer restarts automatically.

NOTES: If the computer is set to boot from the CD-ROM or DVD-ROM drive before the hard-disk drive, remove the System Software CD before the computer restarts so that the computer does not boot from the CD. For information on changing the boot sequence, refer to Appendix B, "Using the System Setup Program."

After the computer restarts, you can change the video resolution.

Install the Touch Pad Driver (Windows 2000)

The touch pad driver controls touch pad and mouse functions.

NOTE: When you are prompted to select a directory, Dell recommends using the default directory settings.

1. Save and close any open files, and exit any open application programs.
2. Insert the *System Software* CD into the CD-ROM or DVD-ROM drive.
3. Click the **Start** button, and then click **Run**.
4. In the **Run** dialog box, type *x*`:\win2000\touchpad\english\setup.exe`, where *x* is the CD-ROM or DVD-ROM drive letter.

   The **WinZip Self-Extractor** window appears.

   If you are using a Japanese-language version of Windows, type *x*`:\win2000\touchpad\japanese\setup.exe`, where *x* is the CD-ROM or DVD-ROM drive letter.

   The CD-ROM or DVD-ROM drive letter is usually *D*.

   NOTICE: Do not install the Japanese-language driver on a computer with a non-Japanese-language operating system.
5. Click **Unzip**.
6. Click **OK**.
7. In the **Welcome** window, click **Next>**.
8. At the **Important Information** window, click **Next>** twice.
9. At the **Start Copying Files** window, click **Next>**.

   The touch pad driver is copied to your hard-disk drive.
10. At the **Setup Complete** window, be sure that the **Yes, I want to restart my computer now** button is selected, and then click **Finish**.

NOTE: If the computer is set to boot from the CD-ROM or DVD-ROM drive before the hard-disk drive, remove the System Software CD before the computer restarts so that the computer does not boot from the CD. For information on changing the boot sequence, refer to Appendix B, "Using the System Setup Program."

The **Information about your Touch Pad** window appears. If you do not want this window to appear each time you start the computer, uncheck the box that says **Show this message the next time Windows starts**. Then click **Close**.

Install the Software DVD Decoder (Windows 2000) (Optional)

The DVD decoder driver allows you to play DVD movies using your DVD-ROM drive on the computer.

NOTE: When you are prompted to select a directory, Dell recommends that you use the default directory setting.

1. Insert the *Dell Inspiron 5000 Software DVD Decoder* CD into the DVD-ROM drive.

   The installation program starts automatically and the **Choose Setup Language** window appears.

   *NOTE: If the installation program does not start automatically, navigate to the Dell Inspiron 5000 Software DVD Decoder CD and click the **Setup** icon.*

2. Select **English**, then click **OK**.

   The **Welcome** screen appears.

3. Click **Next>**.

   The **Software License Agreement** window appears.

4. Click **Yes**.

   The **Choose Destination** window appears.

5. Click **Next>**.

   The files are copied to your disk and the **Setup Complete** window appears.

6. Ensure that the **Yes, I want to restart my computer now** is selected, and then click **Finish**.

   Your computer restarts and the desktop appears.

7. Insert your DVD into the DVD-ROM drive.

   When you start your DVD for the first time, a **Warning** dialog box appears, explaining that DVD playback performance is dependent on your overall system configuration and that some DVD titles are protected with an antitaping product provided by Macrovision, Inc.

   NOTES: A variety of factors determine the DVD's playback performance. For more information, read the "Requirements" section in the release notes that came with your DVD software.

   The Macrovision product allows you to view your DVD on most televisions, but it distorts the video image if played back from a videotape. The DVD decoder software provided with your system does not allow you to play back DVDs with graphics cards that contain a TV-out connector.

If you have a TV-out connector on your computer and your DVD-ROM drive does not play your DVD title, make sure the TV-out feature in your graphics card's software is turned off. Dell does not currently provide a TV-out connector as an accessory item.

8. Click **OK**.

Setting and Changing the DVD-ROM Drive Region Code

If you reinstall the DVD decoder software, you must set the DVD-ROM drive region code before you can play a movie. The region code can be reset if you relocate to another region.

NOTICE: You should reset the region code only when absolutely necessary. You can reset the region code up to four times.

To reset the drive region code, perform the following steps:

1. Insert a DVD coded for the new region into the DVD-ROM drive.

   A notification box appears, explaining that the disc belongs to another region and cannot be played. The notification also explains how to reset the region setting.

2. Follow the instructions on the screen to change the region setting.

Install the Intel SpeedStep Utility (Windows 2000) (Optional)

NOTICE: Do not install the Intel SpeedStep utility unless your computer has a Mobile Intel Pentium III processor with SpeedStep technology. To determine if your computer has a Mobile Intel Pentium III processor with SpeedStep technology, check for the Intel SpeedStep item in the Power menu of the system setup program. For instructions on using the system setup program, refer to Appendix B, "Using the System Setup Program," found later in this guide.

If your computer has a Mobile Intel Pentium III processor with Intel SpeedStep technology, you must reinstall the Intel SpeedStep utility after you install a new hard-disk drive or reformat your hard-disk drive.

1. Save and close any open files, and exit any open application programs.
2. Insert the *System Software* CD into the CD-ROM or DVD-ROM drive.
3. Click the **Start** button, and then click **Run**.
4. In the **Run** dialog box, type *x*`:\win2000\spd_step\english\setup.exe`, where *x* is the CD-ROM or DVD-ROM drive letter.

   The CD-ROM or DVD-ROM drive letter is usually *D*.

5. Click **OK**.
6. In the **Welcome** window, click **Next>**.

7. In the **Software License Agreement** window, click **Yes**.

8. At the **Setup Complete** window, be sure that the **Yes, I want to restart my computer now** button is selected, and then click **Finish**.

NOTE: If the computer is set to boot from the CD-ROM or DVD-ROM drive before the hard-disk drive, remove the System Software CD before the computer restarts so that the computer does not boot from the CD. For information on changing the boot sequence, refer to Appendix B, "Using the System Setup Program."

Install the System Help From the System Software CD

The Dell Inspiron system *Help* is available on the *System Software* CD.

NOTE: You can also access it from the Dell support Web site at: ***http://support.dell.com****. For instructions, see the following section, "Download the System Help From the Dell Support Web Site."*

To install the system Help from the System Software CD, perform the following steps:

1. Insert the *System Software* CD into the CD-ROM or DVD-ROM drive.

2. Double-click the **My Computer** icon, and then double-click the **CD-ROM** or **DVD-ROM** drive icon.

3. Double-click the **Guide** folder.

4. Right-click the **popup.ocx** file, and then click **Copy**.

5. Double-click the **My Computer** icon, and then double-click the **C:** drive icon.

6. Double-click the **Windows** folder, double-click the **System** folder, and then right-click **Paste**.

7. Click **Start**, and then click **Run**.

8. Type `regsvr32 popup.ocx` and then press <Enter>.

9. Click **OK** when a message window indicates the file was successfully registered.

10. Double-click the **My Computer** icon, and then double-click the **CD-ROM** or **DVD-ROM** icon.

11. Double-click the **Guide** folder, and then double-click the appropriate language folder.

12. Right-click and hold **5000help** and drag it to the Windows desktop.

13. Release the right mouse button.

14. Click **Copy Here**.

Download the System Help From the Dell Support Web Site

As updated information about your computer is incorporated into the system *Help*, Dell compiles and posts the latest version to the Dell support Web site. Dell invites you to occasionally visit the site to see if an updated system *Help* is available.

To download the latest system *Help* from **http://support.dell.com**, enter your service tag sequence, click **Go!**, and then follow the links to the documentation page for your computer.

*NOTE: You must copy the **popup.ocx** file into the **Windows System** folder and run **regserv32 popup.ocx** before you run the system Help. For instructions, refer to the Dell support Web site.*

Updating Drivers and Utilities

The Dell support Web site, **http://support.dell.com**, provides driver and utility updates, as well as technical assistance with questions about your computer. Dell regularly tests and releases certified drivers and utilities for Inspiron computers.

In addition, if you have access to a computer with a modem and/or fax capabilities, you can access the Dell TechConnect bulletin board service (BBS), AutoTech service, and TechFax service. The Dell Web site, **http://www.dell.com**, also contains links to these services.

CHAPTER 4
Getting Help

This chapter describes the tools Dell provides to help you when you have a problem with your computer. It also tells you when and how to call Dell for technical or customer assistance.

Technical Assistance

If you need assistance with a technical problem, perform the following steps:

1. Complete the troubleshooting checks in Chapter 2, "Troubleshooting."
2. Run the Dell Diagnostics as described in Chapter 2, "Running the Dell Diagnostics."
3. Make a copy of and complete the Diagnostics Checklist (see Figure 4-1).
4. Use Dells' extensive suite of online services available at Dell's World Wide Web site (**http://www.dell.com**) for help with installation and troubleshooting procedures.

   For more information, refer to "World Wide Web" found later in this chapter.
5. If the preceding steps have not resolved the problem, call Dell for technical assistance.

   When prompted by Dell's automated telephone system, enter your Express Service Code to route the call directly to the proper support personnel. If you do not have an Express Service Code, open the **Dell Accessories** folder, double-click the **Express Service Code** icon, and follow the directions.

   NOTE: Dell's Express Service Code system may not be available in all countries.

   For instructions on using the technical support service, refer to "Technical Support Service" and "Before You Call" found later in this chapter.

Help Tools

Dell provides a number of tools to assist you. These tools are described in the following sections.

NOTE: Some of the following tools are not always available in all locations outside the continental U.S. Please call your local Dell representative for information on availability.

World Wide Web

The Internet is your most powerful tool for obtaining information about your computer and other Dell products. Through the Internet, you can access most of the services described in this chapter, including AutoTech, TechFax, order status, technical support, and product information.

You can access Dell's support Web site at **http://support.dell.com.** To select your country, click the map that appears. The **Welcome to support.dell.com** page opens. Enter your system information to access help tools and information. Dell can be accessed electronically using the following addresses:

- World Wide Web

  http://www.dell.com/

  http://www.dell.com/ap/ (for Asian/Pacific countries only)

  http://www.euro.dell.com (for Europe only)

  http://www.dell.com/la (for Latin American countries)

- Anonymous file transfer protocol (FTP)

  ftp1.dell.com/

  Log in as `user: anonymous`, and use your e-mail address as your password.

- Electronic Support Service

  mobile_support@us.dell.com

  apsupport@dell.com (for Asian/Pacific countries only)

  http://support.euro.dell.com (for Europe only)

- Electronic Quote Service

  sales@dell.com

  apmarketing@dell.com (for Asian/Pacific countries only)

- Electronic Information Service

  info@dell.com

AutoTech Service

Dell's automated technical support service—AutoTech—provides recorded answers to the questions most frequently asked by Dell customers.

When you call AutoTech, you use your touch-tone telephone to select the subjects that correspond to your questions. You can even interrupt an AutoTech session and

continue the session later. The code number that the AutoTech service gives you allows you to continue your session where you ended it.

The AutoTech service is available 24 hours a day, seven days a week. You can also access this service through the technical support service. For the telephone number to call, refer to "Dell Contact Numbers" found later in this chapter.

TechFax Service

Dell takes full advantage of fax technology to serve you better. Twenty-four hours a day, seven days a week, you can call the Dell TechFax line toll-free for all kinds of technical information.

Using a touch-tone phone, you can select from a full directory of topics. The technical information you request is sent within minutes to the fax number you designate. For the TechFax telephone number to call, refer to "Dell Contact Numbers" found later in this chapter.

Automated Order-Status System

You can call this automated service to check on the status of any Dell products that you have ordered. A recording prompts you for the information needed to locate and report on your order. For the telephone number to call, refer to "Dell Contact Numbers" found later in this chapter.

Technical Support Service

Dell's industry-leading hardware technical-support service is available 24 hours a day, seven days a week, to answer your questions about Dell hardware.

Our technical support staff pride themselves on their track record: more than 90 percent of all problems and questions are taken care of in just one toll-free call, usually in less than 10 minutes. When you call, our experts can refer to records kept on your Dell system to better understand your particular question. Our technical support staff use computer-based diagnostics to provide fast, accurate answers to questions.

To contact Dell's technical support service, first refer to the section titled "Before You Call" and then call the number for your country as listed in "Dell Contact Numbers" found later in this chapter.

Problems With Your Order

If you have a problem with your order, such as missing parts, wrong parts, or incorrect billing, contact Dell Computer Corporation for customer assistance. Have your invoice or packing slip handy when you call. For the telephone number to call, refer to "Dell Contact Numbers" found later in this chapter.

Product Information

If you need information about additional products available from Dell Computer Corporation, or if you would like to place an order, visit Dell's World Wide Web site at **http://www.dell.com/**. For the telephone number to call to speak to a sales specialist, refer to "Dell Contact Numbers" found later in this chapter.

Returning Items for Warranty Repair or Credit

Prepare all items being returned, whether for repair or credit, as follows:

1. Call Dell to obtain an authorization number, and write it clearly and prominently on the outside of the box.

   For the telephone number to call, refer to "Dell Contact Numbers" found later in this chapter.

2. Include a copy of the invoice and a letter describing the reason for the return.

3. Include a copy of the Diagnostics Checklist indicating the tests you have run and any error messages reported by the Dell Diagnostics.

4. Include any accessories that belong with the item(s) being returned (power cables, software diskettes, guides, and so on) if the return is for credit.

5. Pack the equipment to be returned in the original (or equivalent) packing materials.

   You are responsible for paying shipping expenses. You are also responsible for insuring any product returned, and you assume the risk of loss during shipment to Dell Computer Corporation. Collect-on-delivery (C.O.D.) packages are not accepted.

Returns that are missing any of the preceding requirements will be refused at our receiving dock and returned to you.

Before You Call

NOTE: Have your Express Service Code or service tag sequence ready when you call. The code helps Dell's automated-support telephone system direct your call more efficiently.

Remember to fill out the Diagnostics Checklist (Figure 4-1). If possible, turn on your computer before you call Dell for technical assistance and call from a telephone at or near the computer. You may be asked to type some commands at the keyboard, relay detailed information during operations, or try other troubleshooting steps possible only at the computer system itself. Make sure that the system documentation is available.

CAUTION: To help prevent the risk of electrical shock, disconnect all external devices, remove the battery, and disconnect the AC adapter from the computer before installing or replacing the hard-disk drive and memory modules.

Diagnostics Checklist

Name: _____Date: _____

Address: _____Phone number:_____

Service tag (an alphanumeric code on the back or bottom of the computer):_____

Express Service Code:_____

Return Material Authorization Number (if provided by Dell support technician): _____

Operating system and version:_____

Peripherals: _____

_____

_____

Expansion cards:_____

_____

_____

Are you connected to a network? ☐ yes ☐ no

Network, version, and network card: _____

Programs and versions:_____

_____

_____

_____

Refer to your operating system documentation to determine the contents of the system's start-up files. If the computer is connected to a printer, print each file. Otherwise, record the contents of each file before calling Dell.

Error message or diagnostic code: _____

Description of problem and troubleshooting procedures you performed: _____

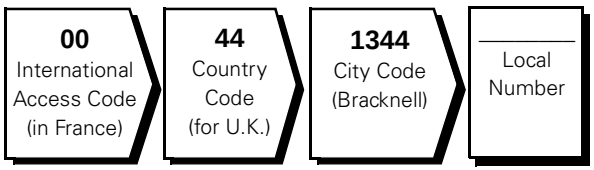
_____

_____

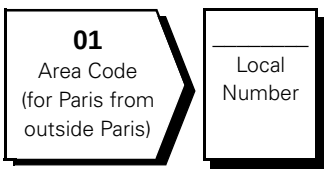
Figure 4-1. Diagnostics Checklist

Dell Contact Numbers

When you need to contact Dell, use the telephone numbers, codes, and electronic addresses provided in Tables 4-1 and 4-2. Table 4-1 provides the various codes required to make long-distance and international calls. Table 4-2 provides local telephone numbers, area codes, toll-free numbers, Web site and e-mail addresses, if applicable, for each department or service available in various countries around the world. If you are making a direct-dialed call to a location outside of your local telephone service area, determine which codes to use (if any) in Table 4-1 in addition to the local numbers provided in Table 4-2. For example, to place an international call from Paris, France to Bracknell, England, dial the international access code for France followed by the country code for the U.K., the city code for Bracknell, and then the local number as shown in the following illustration.



To place a long-distance call within your own country, use area codes instead of international access codes, country codes, and city codes. For example, to call Paris, France from Montpellier, France, dial the area code plus the local number as shown in the following illustration.



The codes required depend on where you are calling from as well as the destination of your call; in addition, each country has a different dialing protocol. If you need assistance in determining which codes to use, contact a local or an international operator.

NOTE: Toll-free numbers are for use only within the country for which they are listed. Area codes are most often used to call long distance within your own country (not internationally)—in other words, when your call originates in the same country you are calling.

Table 4-1. International Dialing Codes

Country (City)	International Access Code	Country Code	City Code
Australia (Sydney)	0011	61	2
Austria (Vienna)	900	43	1
Belgium (Brussels)	00	32	2
Brazil	0021	55	51
Brunei	—	673	—
Canada (North York, Ontario)	011	—	Not required
Chile (Santiago)	—	56	2
China (Xiamen)	—	86	592
Czech Republic (Prague)	00	420	2
Denmark (Horsholm)	009	45	Not required
Finland (Helsinki)	990	358	9
France (Paris) (Montpellier)	00	33	(1) (4)
Germany (Langen)	00	49	6103
Hong Kong	001	852	Not required
Ireland (Bray)	16	353	1
Italy (Milan)	00	39	2
Japan (Kawasaki)	001	81	44
Korea (Seoul)	001	82	2
Luxembourg	00	352	—
Macau	—	853	Not required
Malaysia (Penang)	00	60	4
Mexico (Colonia Granada)	95	52	5
Netherlands (Amsterdam)	00	31	20
New Zealand	00	64	—
Norway (Lysaker)	095	47	Not required
Poland (Warsaw)	011	48	22
Singapore (Singapore)	005	65	Not required
South Africa (Johannesburg)	09/091	27	11

Table 4-1. International Dialing Codes (continued)

Country (City)	International Access Code	Country Code	City Code
Spain (Madrid)	07	34	91
Sweden (Upplands Vasby)	009	46	8
Switzerland (Geneva)	00	41	22
Taiwan	002	886	—
Thailand	001	66	—
U.K. (Bracknell)	010	44	1344
U.S.A. (Austin, Texas)	011	1	Not required

Table 4-2. Dell Contact Numbers

Country (City)	Department Name or Service	Area Code	Local Number or Toll-Free Number
Australia (Sydney)	Home and Small Business		1-300-65-55-33
	Government and Business		toll free: 1-800-633-559
	Preferred Accounts Division (PAD)		toll free: 1-800-060-889
	Customer Care		toll free: 1-800-819-339
	Corporate Sales		toll free: 1-800-808-385
	Transaction Sales		toll free: 1-800-808-312
	Fax		toll free: 1-800-818-341
Austria (Vienna) *NOTE: Customers in Austria call Germany for technical and customer assistance.*	Home/Small Business Sales	01	795 567602
	Home/Small Business Fax	01	795 67605
	Home/Small Business Customer Care	01	795 67603
	Preferred Accounts/Corporate Customer Care		0660 8056
	Home/Small Business Technical Support	01	795 67604
	Preferred Accounts/Corporate Technical Support		0660 8779
	Switchboard	01	491 04 0
	Web site: **http://support.euro.dell.com**		
	E-mail: tech_support_germany@dell.com		

Table 4-2. Dell Contact Numbers (continued)

Country (City)	Department Name or Service	Area Code	Local Number or Toll-Free Number
Belgium (Brussels)	Technical Support	02	481 92 88
	Customer Care	02	481 91 19
	Home/Small Business Sales		toll free: 0800 16884
	Corporate Sales	02	481 91 00
	Fax	02	481 92 99
	Switchboard	02	481 91 00
	Web site: **http://support.euro.dell.com**		
	E-mail: tech_be@dell.com		
Brazil	Sales, Customer Support, Technical Support		0800 90 3355
Brunei *NOTE: Customers in Brunei call Malaysia for sales, customer, and technical assistance.*	Customer Technical Support (Penang, Malaysia)		810 4966
	Customer Service (Penang, Malaysia)		810 4949
	Transaction Sales (Penang, Malaysia)		810 4955
Canada (North York, Ontario) *NOTE: Customers in Canada call the U.S.A. for access to TechConnect BBS.*	Automated Order-Status System		toll free: 1-800-433-9014
	AutoTech (Automated technical support)		toll free: 1-800-247-9362
	Customer Care (From outside Toronto)		toll free: 1-800-387-5759
	Customer Care (From within Toronto)	416	758-2400
	Customer Technical Support		toll free: 1-800-847-4096
	Sales (Direct Sales—from outside Toronto)		toll free: 1-800-387-5752
	Sales (Direct Sales—from within Toronto)	416	758-2200
	Sales (Federal government, education, and medical)		toll free: 1-800-567-7542
	Sales (Major Accounts)		toll free: 1-800-387-5755
	TechConnect BBS (Austin, Texas, U.S.A.)	512	728-8528
	TechFax		toll free: 1-800-950-1329
Chile (Santiago) *NOTE: Customers in Chile call the U.S.A for sales, customer, and technical assistance.*	Sales, Customer Support, and Technical Support		toll free: 1230-020-4823

Table 4-2. Dell Contact Numbers *(continued)*

Country (City)	Department Name or Service	Area Code	Local Number or Toll-Free Number
China (Xiamen)	Customer Service		toll free: 800 858 2437
	Sales		toll free: 800 858 2222
Czech Republic (Prague)	Technical Support	02	22 83 27 27
	Customer Care	02	22 83 27 11
	Fax	02	22 83 27 14
	TechFax	02	22 83 27 28
	Switchboard	02	22 83 27 11
	Web site: **http://support.euro.dell.com**		
	E-mail: czech_dell@dell.com		
Denmark (Horsholm) *NOTE: Customers in Denmark call Sweden for fax technical support.*	Technical Support		45170182
	Home/Small Business Customer Care		32875505
	Switchboard		45170100
	Fax Technical Support (Upplands Vasby, Sweden)		859005594
	Fax Switchboard		45170117
	Web site: **http://support.euro.dell.com**		
	E-mail: den_support@dell.com		
Finland (Helsinki)	Technical Support	09	253 313 60
	Technical Support Fax	09	253 313 81
	Home/Small Business Customer Care	09	693 791 94
	Fax	09	253 313 99
	Switchboard	09	253 313 00
	Web site: **http://support.euro.dell.com**		
	E-mail: fin_support@dell.com		

Table 4-2. Dell Contact Numbers (continued)

Country (City)	Department Name or Service	Area Code	Local Number or Toll-Free Number
France (Paris/Montpellier)	Technical Support	0803	387 270
	Customer Care (Paris)	01	47 62 68 92
	Customer Care (Montpellier)	04	67 06 61 96
	TechConnect BBS (Montpellier)	04	67 22 53 04
	Fax (Montpellier)	04	67 06 60 07
	Switchboard (Paris)	01	47 62 69 00
	Switchboard (Montpellier)	04	67 06 60 00
	Web site: **http://support.euro.dell.com**		
	E-mail: web_fr_tech@dell.com		
Germany (Langen)	Technical Support	06103	766-7200
	Technical Support Fax	06103	766-9222
	Home/Small Business Customer Care		0180-5-224400
	Global Segment Customer Care	06103	766-9570
	Preferred Accounts Customer Care	06103	766-9420
	Large Accounts Customer Care	06103	766-9560
	Public Accounts Customer Care	06103	766-9555
	TechConnect BBS	06103	766-9666
	Switchboard	06103	766-7000
	Web site: **http://www.dell.de/support**		
	E-mail: tech_support_germany@dell.com		
Hong Kong *NOTE: Customers in Hong Kong call Malaysia for customer assistance.*	Technical Support		toll free: 800 96 4107
	Customer Service (Penang, Malaysia)		810 4949
	Transaction Sales		toll free: 800 96 4109
	Corporate Sales		toll free: 800 96 4108

Table 4-2. Dell Contact Numbers (continued)

Country (City)	Department Name or Service	Area Code	Local Number or Toll-Free Number
Ireland (Bray) *NOTE: Customers in Ireland call the U.K. for Home/Small Business customer assistance.*	Technical Support		1-850-543-543
	Customer Care	01	204 4026
	Home/Small Business Customer Care (Bracknell, U.K.)		0870 906 0010
	Sales		1-850-235-235
	SalesFax	01	286 2020
	Fax	01	286 6848
	TechConnect BBS	01	204 4711
	TechFax	01	204 4708
	Switchboard	01	286 0500
	Web site: **http://support.euro.dell.com**		
	E-mail: dell_direct_support@dell.com		
Italy (Milan)	Technical Support	2	57782.690
	Customer Care	2	57782.555
	Sales	2	57782.411
	Fax	2	57503530
	Switchboard	2	57782.1
	Web site: **http://support.euro.dell.com**		
	E-mail: support_italy@dell.com		
Japan (Kawasaki)	Technical Support (Inspiron)		toll free: 0120-1982-56 or 0088-25-3355
	Y2K Support	044	556-4298
	Customer Care	044	556-4240
	Home and Small Business Group Sales	044	556-3344
	Preferred Accounts Division Sales	044	556-3433
	Large Corporate Accounts	044	556-3430
	Faxbox Service		03-5972-5840
	Switchboard	044	556-4300
	Web site: **http://support.jp.dell.com**		

Table 4-2. Dell Contact Numbers (continued)

Country (City)	Department Name or Service	Area Code	Local Number or Toll-Free Number
Korea (Seoul)	Technical Support		toll free: 080-200-3800
	Sales		toll free: 080-200-3777
	Customer Service (Seoul, Korea)		2194-6220
	Customer Service (Penang, Malaysia)		604-810-4949
	Fax		2194-6202
	Switchboard		2194-6000
Latin America *NOTE: Customers in Latin America call the U.S.A. for sales, customer, and technical assistance.*	Customer Technical Support (Austin, Texas, U.S.A.)	512	728-4093
	Customer Service (Austin, Texas, U.S.A.)	512	728-3619
	Fax (Technical Support and Customer Service) (Austin, Texas, U.S.A.)	512	728-3883
	Sales (Austin, Texas, U.S.A.)	512	728-4397
	SalesFax (Austin, Texas, U.S.A.)	512	728-4600 728-3772
Luxembourg *NOTE: Customers in Luxembourg call Belgium for sales, customer, and technical assistance.*	Technical Support (Brussels, Belgium)	02	481 92 88
	Home/Small Business Sales (Brussels, Belgium)		toll free: 080016884
	Corporate Sales (Brussels, Belgium)	02	481 91 00
	Customer Care (Brussels, Belgium)	02	481 91 19
	Fax (Brussels, Belgium)	02	481 92 99
	Switchboard (Brussels, Belgium)	02	481 91 00
	Web site: **http://support.euro.dell.com** E-mail: tech_be@dell.com		
Macau *NOTE: Customers in Macau call Malaysia for customer assistance.*	Technical Support		toll free: 0800 582
	Customer Service (Penang, Malaysia)		810 4949
	Transaction Sales		toll free: 0800 581
Malaysia (Penang)	Technical Support		toll free: 1 800 888 298
	Customer Service	04	810 4949
	Transaction Sales		toll free: 1 800 888 202
	Corporate Sales		toll free: 1 800 888 213

Table 4-2. Dell Contact Numbers (continued)

Country (City)	Department Name or Service	Area Code	Local Number or Toll-Free Number
Mexico (Colonia Granada) *NOTE: Customers in Mexico call the U.S.A. for access to the Automated Order-Status System and AutoTech.*	Automated Order-Status System (Austin, Texas, U.S.A.)	512	728-0685
	AutoTech (Automated technical support) (Austin, Texas, U.S.A.)	512	728-0686
	Customer Technical Support	525	228-7870
	Sales	525	228-7811
			toll free: 91-800-900-37
			toll free: 91-800-904-49
	Customer Service	525	228-7878
	Main	525	228-7800
Netherlands (Amsterdam)	Technical Support	020	581 8838
	Customer Care	020	581 8740
	Home/Small Business Sales		toll free: 0800-0663
	Home/Small Business Sales Fax	020	682 7171
	Corporate Sales	020	581 8818
	Corporate Sales Fax	020	686 8003
	Fax	020	686 8003
	Switchboard	020	581 8818
	Web site: **http://support.euro.dell.com**		
	E-mail: tech_nl@dell.com		
New Zealand	Home and Small Business		0800 446 255
	Government and Business		0800 444 617
	Sales		0800 441 567
	Fax		0800 441 566
Norway (Lysaker) *NOTE: Customers in Norway call Sweden for fax technical support.*	Technical Support		671 16882
	Home/Small Business Customer Care		23162298
	Switchboard		671 16800
	Fax Technical Support (Upplands Vasby, Sweden)		590 05 594
	Fax Switchboard		671 16865
	Web site: **http://support.euro.dell.com**		
	E-mail: nor_support@dell.com		

Table 4-2. Dell Contact Numbers (continued)

Country (City)	Department Name or Service	Area Code	Local Number or Toll-Free Number
Poland (Warsaw)	Technical Support	22	60 61 999
	Customer Care	22	60 61 999
	Sales	22	60 61 999
	Fax	22	60 61 998
	Switchboard	22	60 61 999
	Web site: **http://support.euro.dell.com**		
	E-mail: pl_support@dell.com		
Singapore (Singapore) *NOTE: Customers in Singapore call Malaysia for customer assistance.*	Technical Support		toll free: 800 6011 051
	Customer Service (Penang, Malaysia)	04	810 4949
	Transaction Sales		toll free: 800 6011 054
	Corporate Sales		toll free: 800 6011 053
South Africa (Johannesburg)	Technical Support	011	709 7710
	Customer Care	011	709 7710
	Sales	011	706 7700
	Fax	011	709 0495
	Switchboard	011	709 7700
	Web site: **http://support.euro.dell.com**		
	E-mail: dell_za_support@dell.com		
Southeast Asian/ Pacific Countries (excluding Australia, Brunei, China, Hong Kong, Japan, Korea, Macau, Malaysia, New Zealand, Singapore, Taiwan, and Thailand—refer to individual listings for these countries)	Customer Technical Support, Customer Service, and Sales (Penang, Malaysia)		60 4 810-4810

Table 4-2. Dell Contact Numbers (continued)

Country (City)	Department Name or Service	Area Code	Local Number or Toll-Free Number
Spain (Madrid)	Technical Support		902 100 130
	Corporate Customer Care		902 118 546
	Home/Small Business Customer Care		902 118 540
	TechConnect BBS	91	329 33 53
	Corporate Sales		902 100 185
	Home/Small Business Sales		902 118 541
	Switchboard	91	722 92 00
	Web site: **http://support.euro.dell.com**		
	E-mail: es_support@dell.com		
Sweden (Upplands Vasby)	Technical Support	08	590 05 199
	Home/Small Business Customer Care		587 70 527
	Fax Technical Support	08	590 05 594
	Sales	08	590 05 185
	Web site: **http://support.euro.dell.com**		
	E-mail: swe_support@dell.com		
Switzerland (Geneva)	Technical Support		0844 811 411
	Customer Care		0848 802 802
	Fax	022	799 01 90
	Switchboard	022	799 01 01
	Web site: **http://support.euro.dell.com**		
	E-mail: swisstech@dell.com		
Taiwan	Technical Support		toll free: 0080 60 1255
	Transaction Sales		toll free: 0080 651 228/0800 33 556
	Corporate Sales		toll free: 0080 651 227/0800 33 555
Thailand *NOTE: Customers in Thailand call Malaysia for customer assistance.*	Technical Support		toll free: 0880 060 07
	Customer Service (Penang, Malaysia)		810 4949
	Sales		toll free: 0880 060 09

Table 4-2. Dell Contact Numbers (continued)

Country (City)	Department Name or Service	Area Code	Local Number or Toll-Free Number
U.K. (Bracknell)	Technical Support		0870-908-0800
	Corporate Customer Care	01344	720206
	Home/Small Business Customer Care		0870-906-0010
	TechConnect BBS		0870-908-0610
	Sales	01344	720000
	AutoFax		0870-908-0510
	Web site: **http://support.euro.dell.com**		
	E-mail: dell_direct_support@dell.com		

Table 4-2. Dell Contact Numbers (continued)

Country (City)	Department Name or Service	Area Code	Local Number or Toll-Free Number
U.S.A. (Austin, Texas)	Dedicated Technical Support for Inspiron 5000 Computers		toll free: 1-877-711-3355
	Automated Order-Status System		toll free: 1-800-433-9014
	AutoTech (Automated technical support)		toll free: 1-800-247-9362
	Dell Home and Small Business Group:		
	Customer Technical Support (Return Material Authorization Numbers)		toll free: 1-800-624-9896
	Customer Technical Support (Home sales purchased via **http://www.dell.com**)		toll free: 1-877-576-3355
	Customer Service (Credit Return Authorization Numbers)		toll free: 1-800-624-9897
	National Accounts (systems purchased by established Dell national accounts [have your account number handy], medical institutions, or value-added resellers [VARs]):		
	Customer Service and Technical Support (Return Material Authorization Numbers)		toll free: 1-800-822-8965
	Public Americas International (systems purchased by governmental agencies [local, state, or federal] or educational institutions):		
	Customer Service and Technical Support (Return Material Authorization Numbers)		toll free: 1-800-234-1490
	Dell Sales		toll free: 1-800-289-3355
			toll free: 1-800-879-3355
	Spare Parts Sales		toll free: 1-800-357-3355
	DellWare Technical Support Locator Service		toll free: 1-800-753-7201
	DellWare FaxBack Service	512	728-1681
	Fee-Based Technical Support		toll free: 1-800-433-9005
	Sales (Catalogs)		toll free: 1-800-426-5150
	Fax		toll free: 1-800-727-8320
	TechFax		toll free: 1-800-950-1329
	TechConnect BBS	512	728-8528
	Dell Services for the Deaf, Hard-of-Hearing, or Speech-Impaired		toll free: 1-877-DELLTTY (1-877-335-5889)
	Switchboard	512	338-4400

APPENDIX A
Technical Specifications

The most complete specifications for your computer are available on Dell's World Wide Web Support site at **http://support.dell.com**.

Table A-1. Technical Specifications

Microprocessor	
Microprocessor type	Intel mobile microprocessor
L1 cache	32 KB (internal)
L2 cache	128- or 256-KB (integrated) SRAM
External bus frequency	66 or 100 MHz
Math coprocessor	internal to the microprocessor
Chip Set and Bus Architecture	
System chip set	Intel mobile 440BX AGP
Data bus width	64 bits
DRAM bus width	64 bits
Microprocessor address bus width	32 bits
Flash EPROM	4 Mb

NOTE: For the full name of an abbreviation or acronym used in this table, see the Glossary in the system Help.

Table A-1. Technical Specifications (continued)

PC Card	
PCI controller	Texas Instruments PCI 1225 CardBus controller
PC Card connectors	two (supports two Type I or Type II cards or one Type III card)
Cards supported	3.3 V and 5 V
PC Card connector size	68 pins
Data width (maximum)	32 bits
Memory	
Architecture	SDRAM
Memory module capacities	32, 64, 192, 128, and 256 MB
Minimum RAM	32 MB
Maximum RAM	512 MB
Memory access time/clock frequency	66 or 100 MHz
BIOS address	F000:0000
Connectors	
Serial (DTE)	9-pin connector; 16550-compatible, 16-byte buffer
Parallel	25-hole connector; bidirectional, normal, PS/2, EPP 1.9, or ECP
Video	15-hole connector
PS/2 keyboard/mouse	6-pin mini-DIN connector
Infrared	IrDA 1.1 sensor
Expansion/docking	240-pin connector
Audio	microphone-in, line-out, and line-in connectors
TV-out	S-video (composite video supported with adapter cable
USB	4-pin connector

NOTE: For the full name of an abbreviation or acronym used in this table, see the Glossary in the system Help.

Table A-1. Technical Specifications (continued)

Integrated Audio	
Audio type	Sound Blaster Pro-compatible voice and music functions, HRTF 3D positional audio, hardware wavetable
Audio controller	ESS Technology Maestro-2E
Conversion	16-bit (stereo analog-to-digital and digital-to-analog)
FM music	20 voice, 72 operator
Interfaces:	
Internal	PCI bus, microphone, dual stereo speakers
External	microphone-in, line-out, line-in
Internal speaker amplifier	1.0-W stereo (0.5 W per speaker)
External microphone input voltage range	280 mV peak to peak
Line/audio input voltage range	2.8 V peak to peak
Volume controls	keyboard commands, volume buttons, application program menus
Video	
Video type	64-bit (128-bit hardware-accelerated) AGP
Video controller	4- or 8-MB ATI Mobility-P AGP
Video memory	4- or 8-MB, 125-MHz SGRAM
LCD interface	65-MHz LVDS
TV support	NTSC or PAL in S-video and composite modes
Display	
Type	Active-matrix color TFT
Response time (typical)	80 ms
Operating angle	0° (closed) to 140°
Dot pitch	0.264 mm
Power consumption	3.9 W
Controls	brightness can be controlled through key combinations

NOTE: For the full name of an abbreviation or acronym used in this table, see the Glossary in the system Help.

Table A-1. Technical Specifications (continued)

Integrated Keyboard	
Number of keys	87 (U.S. and Canada); 88 (Europe); 90(Japan)
Key travel	3.0 ± 0.5 mm (0.12 ± 0.02 inch)
Key spacing	19.1 mm (0.75 inch)
Layout	QWERTY/AZERTY/Kanji
Touch Pad	
Interface	PS/2-compatible
X/Y position resolution (graphics table mode)	20 points/mm (500 points/inch)
Size:	
Thickness	4.65 mm (0.18 inch) at highest component
Width	64-mm (2.52-inch) sensor-active area
Height	47.0-mm (1.85-inch) rectangle with 0.5-mm (0.02-inch) tabs
Weight	15 g (0.52 ounce) ± 0.5 g (0.001 ounce)
Power:	
Supply voltage	5 V ± 10%
Supply current	4 mA (maximum operating current)
Battery	
Type	lithium ion
Dimensions:	
Depth	148.2 mm (5.83 inches)
Height	23.8 mm (0.94 inch)
Width	116.2 mm (4.58 inches)
Weight	0.43 to 0.46 kg (0.98 to 1.01 lb)
Voltage	14.4 VDC

NOTE: For the full name of an abbreviation or acronym used in this table, see the Glossary in the system Help.

Table A-1. Technical Specifications (continued)

Battery *(continued)*	
Charge time (approximate)[1]	
Computer on	2.5 to 3.5 hours
Computer off	1.5 hours
Operating time (approximate):	2 to 3 hours with a single battery, 4 to 6 hours with an additional battery installed in the media bay
Life span (approximate)	400 discharge/charge cycles
Temperature range:	
Charge	5° to 35°C (41° to 95°F)
Discharge	5° to 35°C (41°F to 95°F)
Storage	–20° to 50°C (–4° to 122°F)
AC Adapter	
Input voltage	100 to 240 VAC
Input current (maximum)	1.5 at 90 VAC, full load
Input frequency	50 to 60 Hz
Output current	3.5 A (continuous)
Output power	70 W
Rated output voltage	19 VDC
Dimensions:	
Height	30 mm (1.2 inches)
Width	62.0 mm (2.4 inches)
Depth	110 mm (4.3 inches)
Weight (with cables)	0.32 kg (0.71 lb)
Temperature range:	
Operating	0° to 40°C (32°F to 104°F)
Storage	–20° to 65°C (–4°F to 149°F)

[1] *Battery performance features such as charge time, operating time, and life span can vary according to the conditions under which the computer and battery are used.*

NOTE: For the full name of an abbreviation or acronym used in this table, see the Glossary in the system Help.

Table A-1. Technical Specifications (continued)

Environmental (Computer)	
Temperature:	
Operating	5° to 35°C (41° to 95°F)
Storage	–20° to 50°C (–4° to 122°F)
Relative humidity	10% to 90% (noncondensing)
Maximum vibration:	
Operating	0.9 GRMS using a random-vibration spectrum that simulates shipment by air
Storage	1.3 GRMS using a random-vibration spectrum that simulates shipment by truck
Maximum shock:	
Operating	1.52 m/sec (60 inches/sec) (less than or equal to a pulse width of 2 ms)
Storage	2.03 m/sec (80 inches/sec) (less than or equal to a pulse width of 2 ms)
Altitude:	
Operating	0 to 3048 m (0 to 10,000 ft)
Storage	0 to 12,192 m (0 to 40,000 ft)

NOTE: For the full name of an abbreviation or acronym used in this table, see the Glossary in the system Help.

APPENDIX B
Using the System Setup Program

NOTICE: Dell recommends that you change the system setup program settings only when absolutely necessary. Changing certain system device settings could cause hardware conflicts.

You can use the system setup program to:

- Change your system configuration information after you add, change, or remove hardware connected to or installed inside your computer
- Verify information about your current computer configuration, such as the amount of system memory
- Set or change selectable settings—for example, the system password

*NOTE: When your computer is running the Microsoft Windows 98 Second Edition operating system, certain **Control Panel** settings override system setup program settings. For more information, see "Power Menu" found later in this appendix.*

Accessing the System Setup Program

NOTICE: To avoid data loss, save and close any open files and exit any open application programs before you access the system setup program.

To access the system setup program, turn on the computer and press <F2> as soon as you see the Dell logo.

NOTE: The computer restarts automatically when you exit the system setup program.

The system setup program includes the following menus on the main screen:

- **Main**
- **System Devices**
- **Security**
- **Power**
- **Boot**
- **Exit**

Navigating Through the System Setup Program

Use the integrated keyboard (see Table B-1) to make all selections in the system setup program.

NOTE: External Universal Serial Bus (USB) keyboards only function when Windows 98 Second Edition is running.

Table B-1. System Setup Program Navigation Keys

Key	Function
<F1>	System setup program Help information appears
<↑> or <↓>	Highlights an item
<F5> or <F6>	Changes the setting value
<F9>	Selects the default settings for *all* settings in the system setup program
<Esc>	Exits the system setup program without saving changes
<←> or <→>	Highlights a system setup program menu item
<Enter>	Highlights a submenu item Executes a command (on the **Exit** menu only)
<F10>	Saves your changes and exits the system setup program

Main Menu

To see information about a specific item, highlight the item and refer to the **Item Specific Help** area on the screen.

*NOTE: When your computer is running the Microsoft Windows 98 Second Edition operating system, the **Television Type** setting can be overridden by the operating system. For more information, see "Power Menu" found later in this appendix.*

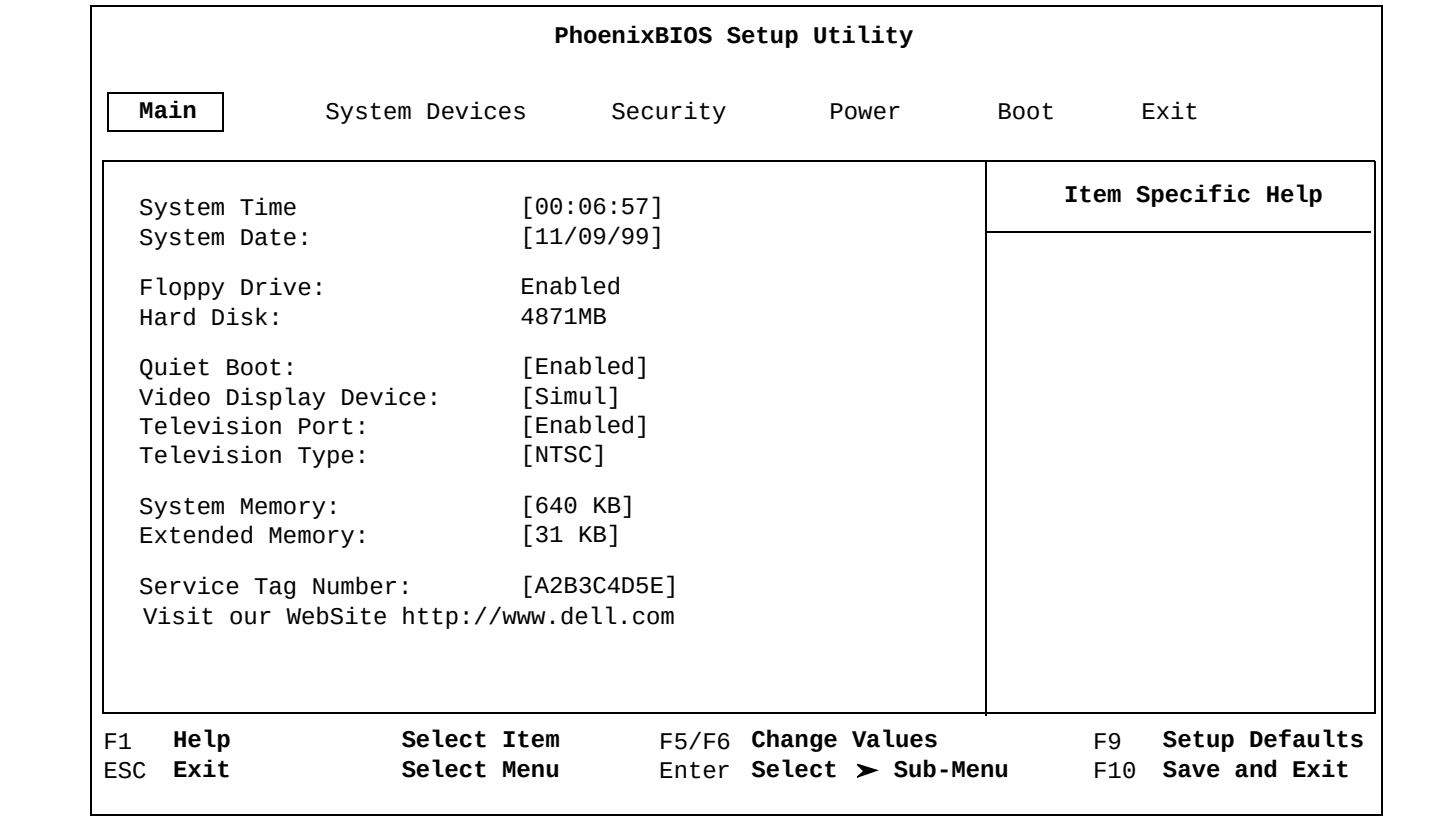


Figure B-1. Main Menu

System Devices Menu

To see information about a specific item, highlight the item and refer to the **Item Specific Help** area on the screen.

NOTICE: Dell recommends that you change the system setup program settings only when absolutely necessary. Changing certain system device settings could cause hardware conflicts.

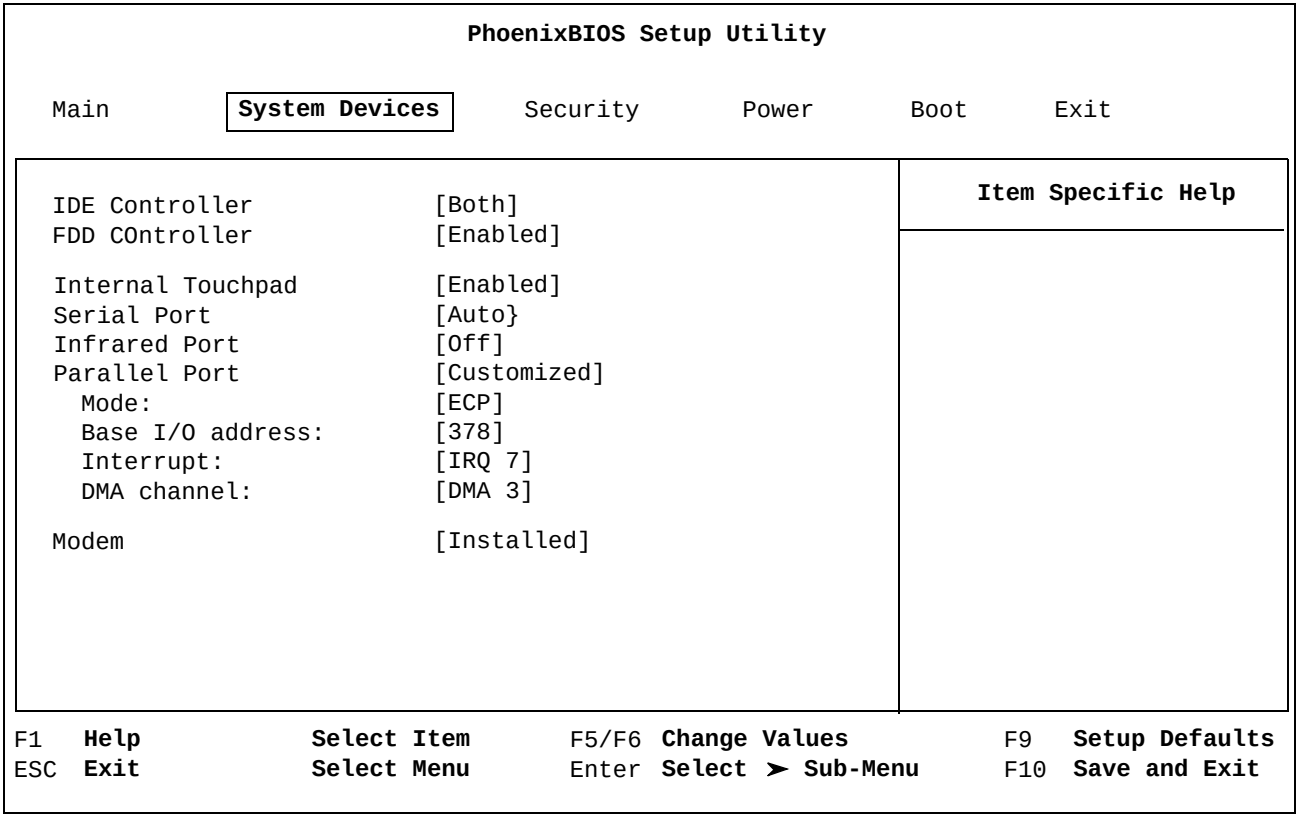


Figure B-2. System Devices Menu

Security Menu

To see information about a specific item, highlight the item and refer to the **Item Specific Help** area on the screen.

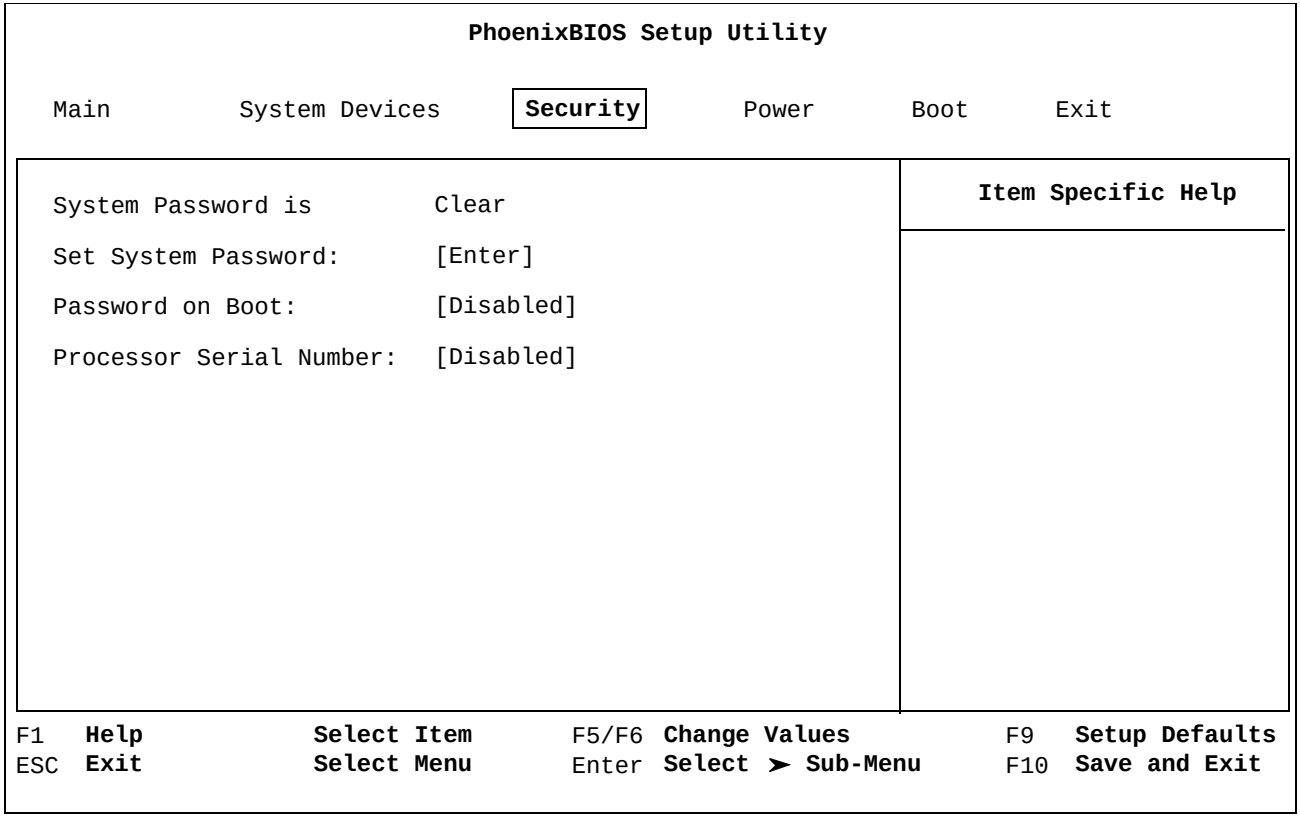


Figure B-3. Security Menu

Power Menu

To see information about a specific item, highlight the item and refer to the **Item Specific Help** area on the screen.

NOTES: The power management settings of the Windows 98 Second Edition operating system take precedence over the settings in the system setup menu Power menu. For more information, see "Conserving Power" in the system Help.

*If your computer has a Mobile Intel Pentium III processor with SpeedStep technology, the **Power** menu has the Intel SpeedStep item.*

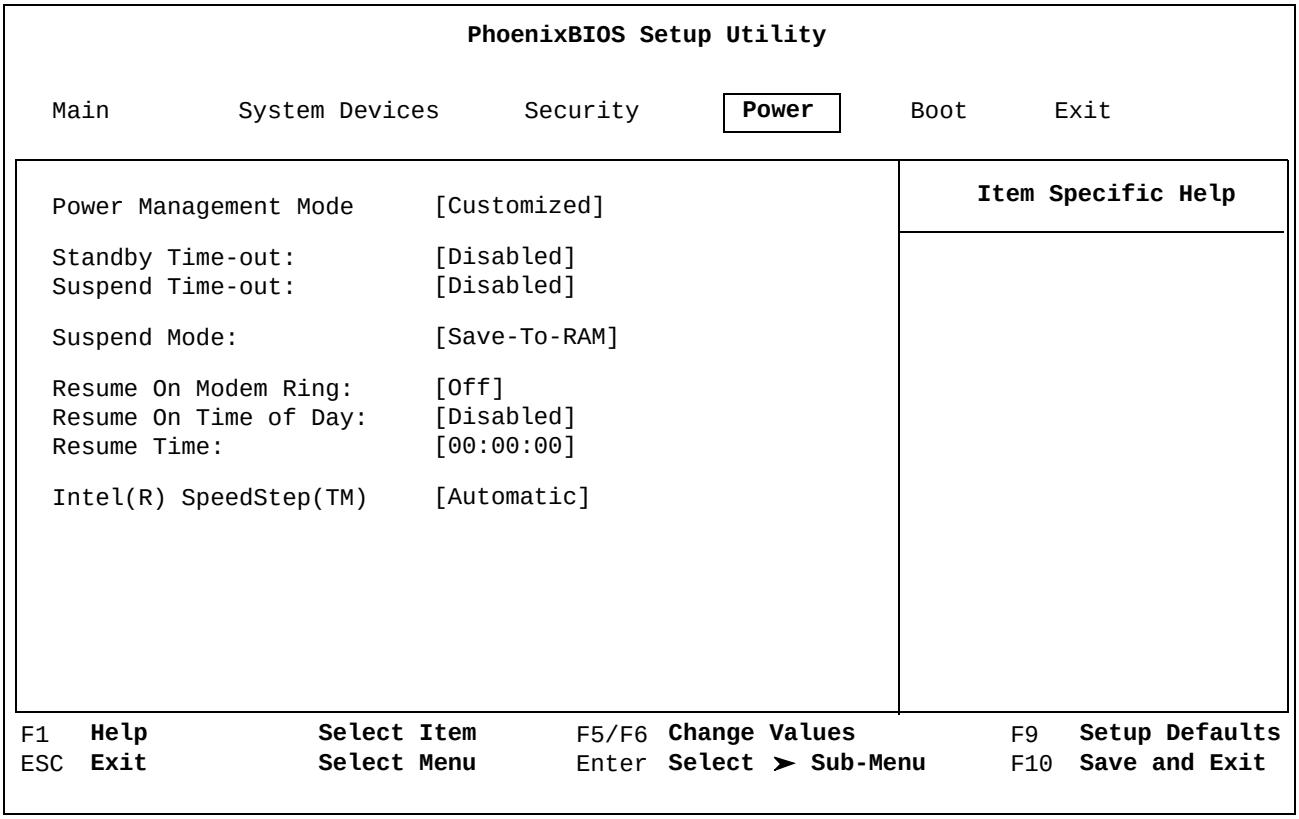


Figure B-4. Power Menu

Boot Menu

To see information about a specific item, highlight the item and refer to the **Item Specific Help** area on the screen.

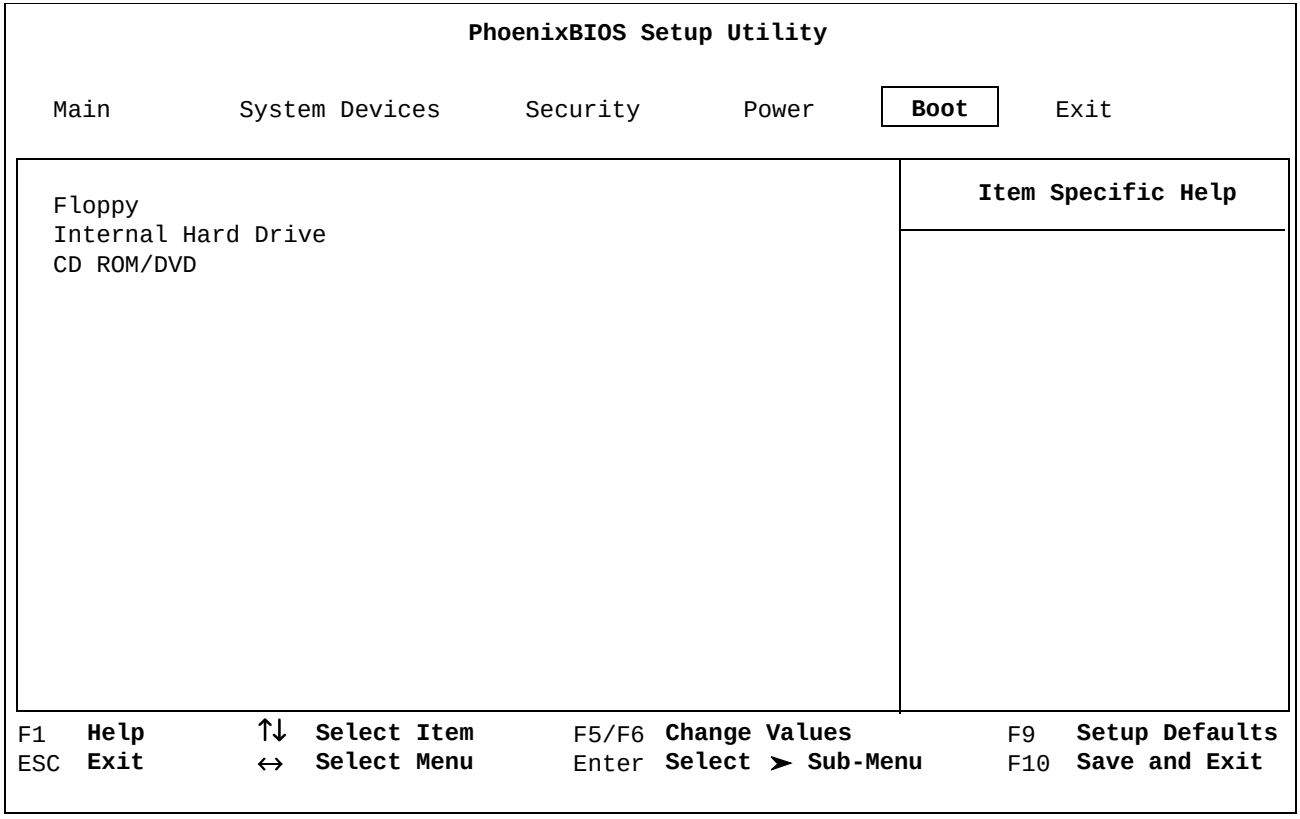


Figure B-5. Boot Menu

Exit Menu

To see information about a specific item, highlight the item and refer to the **Item Specific Help** area on the screen.

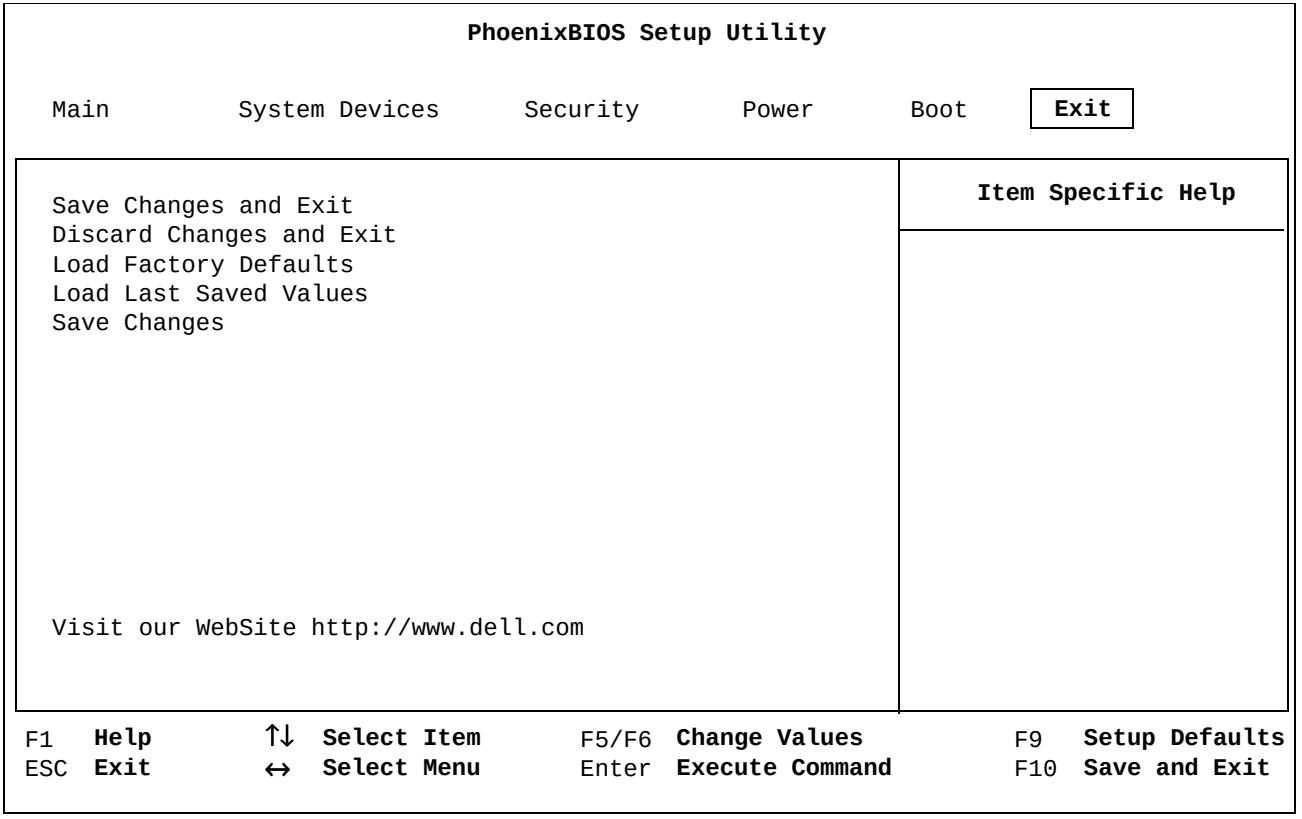


Figure B-6. Exit Menu

APPENDIX C
System Messages

Your application programs, the operating system, and the computer itself can provide you with status and error information in the form of system messages that appear on the computer's display or an external monitor. This appendix documents the system messages generated by the system basic input/output system (BIOS). For other messages, refer to the documentation for your application program or operating system.

If a message appears on the display or external monitor, make a note of the message. See Table C-1 for an explanation of the message and suggestions for correcting any errors. The system messages are listed alphabetically.

NOTE: If the message is not listed in Table C-1, check the documentation for the application programs that were running at the time the message appeared and/or the operating system documentation for an explanation of the message and a recommended action.

Table C-1. System Error Messages

Message	Cause	Action
`CMOS battery is dead—Replace and run Setup`	The CMOS battery is dead.	Call Dell for technical assistance. (For instructions, see Chapter 4, "Getting Help.")
`Diskette drive error`	A connector may be loose or the diskette may be faulty.	If the diskette-drive access indicator lights up when you access a file on the diskette, but you still get this error message, try a different diskette. Turn the computer back on, and check for the error message. If the problem is still not resolved, see "Resolve Diskette Drive Problems" in Chapter 2.
`Fixed disk 0 failure`	The hard-disk drive failed to initialize.	See "Resolve Hard-Disk Drive Problems" in Chapter 2.
`Fixed disk controller failure`	The hard-disk drive controller may be faulty.	Call Dell for technical assistance. (For instructions, see Chapter 4, "Getting Help.")
`Keyboard controller error`	The keyboard controller is faulty.	Call Dell for technical assistance. (For instructions, see Chapter 4, "Getting Help.")

NOTE: For the full name of an abbreviation or acronym used in this table, see the Glossary in the system Help.

Table C-1. System Error Messages (continued)

Message	Cause	Action
`Keyboard error`	If an external keyboard is being used, a cable or connector may be loose or the keyboard may be faulty. If the integrated keyboard is being used, it may be faulty. A key on the integrated keyboard may have been pressed while the computer was booting.	Run the **Stuck Key Test** in the **PC-AT Compatible Keyboards** device group in the Dell Diagnostics. (For instructions see "Running the Dell Diagnostics" in Chapter 2.)
`Operating system not found`	The operating system may be corrupted. Or, the operating system cannot be found on the hard-disk drive or on the diskette in the diskette drive.	Call Dell for technical assistance. (For instructions, see Chapter 4, "Getting Help.")
`Real time clock error`	The CMOS battery that supports data stored in NVRAM may be dead.	Call Dell for technical assistance. (For instructions, see Chapter 4, "Getting Help.")
`System CMOS checksum bad—run Setup`	The BIOS has been updated. CMOS has been corrupted or modified, possibly by an application program that changes data stored in CMOS.	Restart the computer and press <F2> as soon as you see the Dell logo screen to enter the system setup program and reconfigure the computer. If the problem persists, call Dell for technical assistance. (For instructions, see Chapter 4, "Getting Help.")

NOTE: For the full name of an abbreviation or acronym used in this table, see the Glossary in the system Help.

APPENDIX D
Regulatory Notices

Electromagnetic Interference (EMI) is any signal or emission, radiated in free space or conducted along power or signal leads, that endangers the functioning of a radio navigation or other safety service or seriously degrades, obstructs, or repeatedly interrupts a licensed radio communications service. Radio communications services include but are not limited to AM/FM commercial broadcast, television, cellular services, radar, air-traffic control, pager, and Personal Communication Services (PCS). These licensed services, along with unintentional radiators such as digital devices, including computer systems, contribute to the electromagnetic environment.

Electromagnetic Compatibility (EMC) is the ability of items of electronic equipment to function properly together in the electronic environment. While this computer system has been designed and determined to be compliant with regulatory agency limits for EMI, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference with radio communications services, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna.
- Relocate the computer with respect to the receiver.
- Move the computer away from the receiver.
- Plug the computer into a different outlet so that the computer and the receiver are on different branch circuits.

If necessary, consult a Technical Support representative of Dell Computer Corporation or an experienced radio/television technician for additional suggestions. You may find the *FCC Interference Handbook, 1986*, to be helpful. It is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00450-7 or on the World Wide Web at **http://www.fcc.gov/Bureaus/Compliance/WWW/tvibook.html**.

Dell computer systems are designed, tested, and classified for their intended electromagnetic environment. These electromagnetic environment classifications generally refer to the following harmonized definitions:

- Class A is typically for business or industrial environments.
- Class B is typically for residential environments.

Information Technology Equipment (ITE), including peripherals, expansion cards, printers, input/output (I/O) devices, monitors, and so on, that are integrated into or connected to the system should match the electromagnetic environment classification of the computer system.

A Notice About Shielded Signal Cables: Use only shielded cables for connecting peripherals to any Dell device to reduce the possibility of interference with radio communications services. Using shielded cables ensures that you maintain the appropriate EMC classification for the intended environment. For parallel printers, a cable is available from Dell Computer Corporation. If you prefer, you can order a cable from Dell Computer Corporation on the World Wide Web at http://www.dell.com/products/dellware/index.htm.

Most Dell computer systems are classified for Class B environments. To determine the electromagnetic classification for your system or device, refer to the following sections specific for each regulatory agency. Each section provides country-specific EMC/EMI or product safety information.

FCC Notices (U.S. Only)

Most Dell computer systems are classified by the Federal Communications Commission (FCC) as Class B digital devices. However, the inclusion of certain options can change the rating of some configurations to Class A. To determine which classification applies to your computer system, examine all FCC registration labels located on the bottom or back panel of your computer, on card-mounting brackets, and on the cards themselves. If any one of the labels carries a Class A rating, your entire system is considered to be a Class A digital device. If *all* labels carry an FCC Class B rating as distinguished by either an FCC ID number or the FCC logo, (FC), your system is considered to be a Class B digital device.

Once you have determined your system's FCC classification, read the appropriate FCC notice. Note that FCC regulations provide that changes or modifications not expressly approved by Dell Computer Corporation could void your authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

Class A

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's

instruction manual, may cause harmful interference with radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case you will be required to correct the interference at your own expense.

Class B

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instruction manual, may cause interference with radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

The following information is provided on the device or devices covered in this document in compliance with FCC regulations:

- Model number: PPM
- Company name: Dell Computer Corporation
  EMC Engineering Department
  One Dell Way
  Round Rock, Texas 78682 USA
  512-338-4400

Modem Regulatory Information

This equipment complies with Part 68 of the FCC rules. On the bottom of your computer is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for your equipment. If requested, you must provide this information to the telephone company.

The REN is used to determine the quantity of devices that may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most areas, the sum of all the RENs on your telephone line should be less than five to ensure proper service from the telephone company. To be certain of the number of devices that you may connect to a line, as determined by the total RENs, contact your local telephone company.

The registration jack Universal Service Order Code (USOC) used by this equipment is RJ-11C. An FCC compliant telephone cord and modular plug is provided with this

equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack that is Part 68 compliant.

This equipment cannot be used on public coin-phone service provided by the telephone company. Connection to party line service is subject to state tariffs.

There are no user serviceable parts on the modem contained in your computer.

If your telephone equipment causes harm to the telephone network, the telephone company will notify you in advance that service may be temporarily discontinued. If advance notice is not practical, the telephone company will notify you as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of this equipment. If this happens, the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If you experience trouble with this telephone equipment, refer to Chapter 4, "Getting Help," or the section titled "Contacting Dell" in your system *Help* to find the appropriate telephone number for obtaining customer assistance. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

Fax Branding

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device, including fax machines, to send any message unless such message clearly contains in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent, identification of the business, other entity, or individual sending the message, and the telephone number of the sending machine or such business, other entity, or individual. The telephone number provided may not be a 900 number or any other number for which charges exceed local or long-distance transmission charges.

IC Notice (Canada Only)

Most Dell computer systems (and other Dell digital apparatus) are classified by the Industry Canada (IC) Interference-Causing Equipment Standard #3 (ICES-003) as Class B digital devices. To determine which classification (Class A or B) applies to your computer system (or other Dell digital apparatus), examine all registration labels located on the bottom or the back panel of your computer (or other digital apparatus). A statement in the form of "IC Class A ICES-003" or "IC Class B ICES-003" will be located on one of these labels. Note that Industry Canada regulations provide that

changes or modifications not expressly approved by Dell Computer Corporation could void your authority to operate this equipment.Modem Regulatory Information

This Class B (or Class A, if so indicated on the registration label) digital apparatus meets the requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la Classe B (ou Classe A, si ainsi indiqué sur l'étiquette d'enregistration) respecte toutes les exigences du Reglement sur le Materiel Brouilleur du Canada.

Modem Regulatory Information

The IC label identifies certified equipment. This certification means that the equipment meets telecommunications network protective, operational, and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The IC label does not guarantee that the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alteration made by a user to this equipment, or equipment malfunctions, may give the telephone communications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection, that the electrical ground connections of the power utility, telephone lines, and internal metallic water-pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

NOTICE: Users should not attempt to make such connections themselves. Contact the appropriate electric inspection authority, or electrician, as appropriate.

NOTE: The REN assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the RENs of all the devices does not exceed the number five.

The REN for the internal modem as stated on the IC regulatory label located on the bottom of the computer is 0.6B.

The following information is provided in compliance with IC regulations:

Dell Computer Corporation
Warranty and Repair Service Center
One Dell Way
Round Rock, TX 78682 USA

512-338-4400

CTR21 Declaration

This equipment has been approved to [Commission Decision 98/482/EC - CTR 21"] for pan-European single terminal connection to the Public Switched Telephone Network (PSTN). However, due to differences between the individual PSTNs provided in different countries, the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN termination point.In the event of problems, you should contact your equipment supplier in the first instance.

The equipment is known to work with the PSTN's (Public Switched Telephone Networks) of the following countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Norway, Portugal, Spain, Sweden, Switzerland, The Netherlands, and the United Kingdom. There are no known interworking difficulties with the PSTN's of the above mentioned countries.

New Zealand Telecom Warnings

General

"The grant of a Telepermit for any item of terminal equipment indicates only that Telecom has accepted that the item complies with minimum conditions for connection to its network. It indicates no endorsement of the product by Telecom, nor does it provide any sort of warranty. Above all, it provides no assurance that any item will work correctly in all respects with another item of Telepermitted equipment of a different make or model, nor does it imply that any product is compatible with all of Telecom's network services."

"This equipment does not fully meet Telecom impedance requirements. Performance limitations may occur when used in conjunction with some parts of the network. Telecom will accept no responsibility should difficulties arise in such circumstances."

"This equipment shall not be set up to make automatic calls to the Telecom '111' Emergence Service."

"If a charge for local calls is unacceptable, the 'Dial' button should NOT be used for local calls. Only the 7-digits of the local number should be dialed from your telephone. DO NOT dial the area code digit or the '0' prefix."

"This equipment may not provide for the effective hand-over of a call to another device connected to the same line."

Important Notice

"Under power failure conditions, this telephone may not operate. Please ensure that a separate telephone, not dependent on local power, is available for emergency use."

"Some parameters required for compliance with Telecom's Telepermit requirements are dependent on the equipment (PC) associated with this device. The associated equipment shall be set to operate within the following limits for compliance with Telecom's Specification:-

1. (a) There shall be no more than 10 call attempts to the same number within any 30 minute period for any single manual call initiation, and

   (b) the equipment shall go on-hook for a period of not less than 30 seconds between the end of one attempt and the beginning of the next attempt.

2. Where automatic calls are made to different numbers, the equipment shall go on-line for a period of not less than 5 seconds between the end of one attempt and the beginning of the next attempt.

3. The equipment shall be set to ensure that calls are answered between 3 and 30 seconds of receipt of ringing."

"All persons using this device for recording telephone conversations shall comply with New Zealand law. This requires that at least one party to the conversation is to be aware that it is being recorded. In addition, the Principles enumerated in the Privacy Act of 1993 shall be complied with in respect to the nature of the personal information collected, the purpose for its collection, how it is used and what is disclosed to any other party."

CE Notice (European Union)

Marking by the symbol CE indicates compliance of this Dell system to the EMC Directive and the Low Voltage Directive of the European Union. Such marking is indicative that this Dell system meets the following technical standards:

- EN 55022 — "Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment."
- EN 50082-1: 1992 — "Electromagnetic compatibility—Generic immunity standard Part 1: Residential, commercial, and light industry."
- EN 60950 — "Safety of Information Technology Equipment."

NOTE: EN 55022 emissions requirements provide for two classifications:

- *Class A is for typical commercial areas.*
- *Class B is for typical domestic areas.*

A "Declaration of Conformity" in accordance with the preceding directives and standards has been made and is on file at Dell Products Europe BV, Limerick, Ireland.

This Dell device is classified for use in a typical Class B domestic environment.

Battery Disposal

Your computer uses both a lithium-ion battery pack and a nickel-metal hydride (NiMH) coin cell battery. For instructions about replacing the lithium-ion battery pack in your computer, refer to "Running the System With a Battery" in the system *Help*. The NiMH battery is a long-life battery, and it is very possible that you will never need to replace it. However, if this battery ever needs to be replaced, the procedure must be performed by an authorized service technician.

Do not dispose of these batteries along with household waste. Contact your local waste disposal agency for the address of the nearest battery deposit site.

EN 55022 Compliance (Czech Republic Only)

This device belongs to Class B devices as described in EN 55022, unless it is specifically stated that it is a Class A device on the specification label. The following applies to devices in Class A of EN 55022 (radius of protection up to 30 meters). The user of the device is obliged to take all steps necessary to remove sources of interference to telecommunication or other devices.

Pokud není na typovém štitku počítače uvedeno, že spadá do třídy A podle EN 55022, spadá automaticky do třídy B podle EN 55022. Pro zařízení zařazená do třídy A (ochranné pásmo 30m) podle EN 55022 platí následující. Dojde-li k rušení telekomunikačních nebo jinych zařízení, je uživatel povinen provést taková opatření, aby rušení odstranil.

VCCI Notice (Japan Only)

Most Dell computer systems are classified by the Voluntary Control Council for Interference (VCCI) as Class B information technology equipment (ITE). However, the inclusion of certain options can change the rating of some configurations to Class A. ITE, including peripherals, expansion cards, printers, input/output (I/O) devices, monitors, and so on, integrated into or connected to the system, should match the electromagnetic environment classification (Class A or B) of the computer system.

To determine which classification applies to your computer system, examine the regulatory labels/markings (see Figures D-1 and D-2) located on the bottom or back panel of your computer. Once you have determined your system's VCCI classification, read the appropriate VCCI notice.

Class A ITE

この装置は、情報処理装置等電波障害自主規制協議会 (VCCI) の基準に基づくクラス A 情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

This is a Class A product based on the standard of the Voluntary Control Council for Interference (VCCI) for information technology equipment. If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, the user may be required to take corrective actions.

VCCI-A

Figure D-1. VCCI Class A ITE Regulatory Mark

Class B ITE

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づく クラス B 情報技術装置です。この装置は家庭環境で使用することを目的としていますが、ラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。
取扱説明書に従って正しい取り扱いをしてください。

This is a Class B product based on the standard of the Voluntary Control Council for Interference (VCCI) for information technology equipment. If this equipment is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

Figure D-2. VCCI Class B ITE Regulatory Mark

Polish Center for Testing and Certification Notice

The equipment should draw power from a socket with an attached protection circuit (a three-prong socket). All equipment that works together (computer, monitor, printer, and so on) should have the same power supply source.

The phasing conductor of the room's electrical installation should have a reserve short-circuit protection device in the form of a fuse with a nominal value no larger than 16 amperes (A).

To completely switch off the equipment, the power supply cable must be removed from the power supply socket, which should be located near the equipment and easily accessible.

A protection mark "B" confirms that the equipment is in compliance with the protection usage requirements of standards PN-93/T-42107 and PN-EN 55022: 1996.

Wymagania Polskiego Centrum Badań i Certyfikacji

Urządzenie powinno być zasilane z gniazda z przyłączonym obwodem ochronnym (gniazdo z kołkiem). Współpracujące ze sobą urządzenia (komputer, monitor, drukarka) powinny być zasilane z tego samego źródła.

Instalacja elektryczna pomieszczenia powinna zawierać w przewodzie fazowym rezerwową ochronę przed zwarciami, w postaci bezpiecznika o wartości znamionowej nie większej niż 16A (amperów).

W celu całkowitego wyłączenia urządzenia z sieci zasilania, należy wyjąć wtyczkę kabla zasilającego z gniazdka, które powinno znajdować się w pobliżu urządzenia i być łatwo dostępne.

Znak bezpieczeństwa "B" potwierdza zgodność urządzenia z wymaganiami bezpieczeństwa użytkowania zawartymi w PN−93/T-42107 i PN−EN 55022:1996.

Pozostałe instrukcje bezpieczeństwa

- Nie należy używać wtyczek adapterowych lub usuwać kołka obwodu ochronnego z wtyczki. Jeżeli konieczne jest użycie przedłużacza to należy użyć przedłużacza 3-żyłowego z prawidłowo połączonym przewodem ochronnym.
- System komputerowy należy zabezpieczyć przed nagłymi, chwilowymi wzrostami lub spadkami napięcia, używając eliminatora przepięć, urządzenia dopasowującego lub bezzakłóceniowego źródła zasilania.
- Należy upewnić się, aby nic nie leżało na kablach systemu komputerowego, oraz aby kable nie były umieszczone w miejscu, gdzie można byłoby na nie nadeptywać lub potykać się o nie.
- Nie należy rozlewać napojów ani innych płynów na system komputerowy.
- Nie należy wpychać żadnych przedmiotów do otworów systemu komputerowego, gdyż może to spowodować pożar lub porażenie prądem, poprzez zwarcie elementów wewnętrznych.
- System komputerowy powinien znajdować się z dala od grzejników i źródeł ciepła. Ponadto, nie należy blokować otworów wentylacyjnych. Należy unikać kładzenia luźnych papierów pod komputer oraz umieszczania komputera w ciasnym miejscu bez możliwości cyrkulacji powietrza wokół niego.

NOM Information (Mexico Only)

The following information is provided on the device(s) described in this document in compliance with the requirements of the official Mexican standards (NOM):

Exporter:	Dell Computer Corporation One Dell Way Round Rock, TX 78682
Importer:	Dell Computer de México, S.A. de C.V. Rio Lerma No. 302 - 4° Piso Col. Cuauhtemoc 16500 México, D.F.
Ship to:	Dell Computer de México, S.A. de C.V. al Cuidado de Kuehne & Nagel de México S. de R.I. Avenida Soles No. 55 Col. Peñon de los Baños 15520 México, D.F.
Supply voltage:	100–240 VAC
Frequency:	50–60 Hz
System input voltage:	20 VDC, 3.5 A
Input current rating:	1.5 A

Información para NOM (únicamente para México)

La información siguiente se proporciona en el dispositivo o en los dispositivos descritos en este documento, en cumplimiento con los requisitos de la Norma Oficial Mexicana (NOM):

Exportador:	Dell Computer Corporation One Dell Way Round Rock, TX 78682
Importador:	Dell Computer de México, S.A. de C.V. Rio Lerma No. 302 - 4° Piso Col. Cuauhtemoc 16500 México, D.F.
Embarcar a:	Dell Computer de México, S.A. de C.V. al Cuidado de Kuehne & Nagel de México S. de R.I. Avenida Soles No. 55 Col. Peñon de los Baños 15520 México, D.F.
Tensión alimentación:	100–240 VAC
Frecuencia:	50–60 Hz
Voltaje de entrada del sistema:	20 VDC, 3.5 A
Consumo de corriente:	1.5 A

APPENDIX E

Limited Warranty and Return Policy

Three-Year Limited Warranty (U.S. Only)

Dell Computer Corporation ("Dell") manufactures its hardware products from parts and components that are new or equivalent to new in accordance with industry-standard practices. Dell warrants that the hardware products it manufactures will be free from defects in materials and workmanship. The limited warranty term is three years beginning on the date of invoice, as described in the following text.

Damage due to shipping the products to you is covered under this limited warranty. Otherwise, this limited warranty does not cover damage due to external causes, including accident, abuse, misuse, problems with electrical power, servicing not authorized by Dell, usage not in accordance with product instructions, failure to perform required preventive maintenance, and problems caused by use of parts and components not supplied by Dell.

This limited warranty does not cover any items that are in one or more of the following categories: software; external devices (except as specifically noted); accessories or parts added to a Dell system after the system is shipped from Dell; accessories or parts added to a Dell system through Dell's system integration department; accessories or parts that are not installed in the Dell factory; or DellWare™ products. Monitors, keyboards, and mice that are Dell-branded or that are included on Dell's standard price list are covered under this limited warranty; all other monitors, keyboards, and mice (including those sold through the DellWare program) are not covered. Batteries for portable computers are covered only during the initial one-year period of this limited warranty.

Coverage During Year One

During the one-year period beginning on the invoice date, Dell will repair or replace products covered under this limited warranty that are returned to Dell's facility. To request warranty service, you must call Dell's Customer Technical Support within the warranty period. Refer to Chapter 4, "Getting Help," found earlier in this guide or "Contacting Dell" in the system *Help* to find the appropriate telephone number for obtaining customer assistance. If warranty service is required, Dell will issue a Return Material Authorization Number. You must ship the products back to Dell in their original or equivalent packaging, prepay shipping charges, and insure the

shipment or accept the risk of loss or damage during shipment. Dell will ship the repaired or replacement products to you freight prepaid if you use an address in the continental U.S., where applicable. Shipments to other locations will be made freight collect.

NOTE: Before you ship the product(s) to Dell, back up the data on the hard-disk drive(s) and any other storage device(s) in the product(s). Remove any removable media, such as diskettes, CDs, or PC Cards. Dell does not accept liability for lost data or software.

Dell owns all parts removed from repaired products. Dell uses new and reconditioned parts made by various manufacturers in performing warranty repairs and building replacement products. If Dell repairs or replaces a product, its warranty term is not extended.

Coverage During Years Two and Three

During the second and third years of this limited warranty, Dell will provide, on an exchange basis and subject to Dell's Exchange Policy in effect on the date of the exchange, replacement parts for the Dell hardware product(s) covered under this limited warranty when a part requires replacement. You must report each instance of hardware failure to Dell's Customer Technical Support in advance to obtain Dell's concurrence that a part should be replaced and to have Dell ship the replacement part. Dell will ship parts (freight prepaid) if you use an address in the continental U.S., where applicable. Shipments to other locations will be made freight collect. Dell will include a prepaid shipping container with each replacement part for your use in returning the replaced part to Dell. Replacement parts are new or reconditioned. Dell may provide replacement parts made by various manufacturers when supplying parts to you. The warranty term for a replacement part is the remainder of the limited warranty term.

You will pay Dell for replacement parts if the replaced part is not returned to Dell. The process for returning replaced parts, and your obligation to pay for replacement parts if you do not return the replaced parts to Dell, will be in accordance with Dell's Exchange Policy in effect on the date of the exchange.

You accept full responsibility for your software and data. Dell is not required to advise or remind you of appropriate backup and other procedures.

General Provisions

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS WHICH VARY FROM STATE TO STATE (OR JURISDICTION TO JURISDICTION). DELL'S RESPONSIBILITY FOR MALFUNCTIONS AND DEFECTS IN HARDWARE IS LIMITED TO REPAIR AND REPLACEMENT AS SET FORTH IN THIS LIMITED WARRANTY STATEMENT. ALL EXPRESS AND IMPLIED WARRANTIES FOR THE PRODUCT, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF AND CONDITIONS OF MERCHANTIBILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE WARRANTY PERIOD SET FORTH ABOVE AND NO WARRANTIES, WHETHER EXPRESS OR IMPLIED, WILL APPLY AFTER SUCH PERIOD.

SOME STATES (OR JURISDICTIONS) DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE PRECEDING LIMITATION MAY NOT APPLY TO YOU.

DELL DOES NOT ACCEPT LIABILITY BEYOND THE REMEDIES SET FORTH IN THIS LIMITED WARRANTY STATEMENT OR LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION ANY LIABILITY FOR PRODUCTS NOT BEING AVAILABLE FOR USE OR FOR LOST DATA OR SOFTWARE.

SOME STATES (OR JURISDICTIONS) DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE PRECEDING EXCLUSION OR LIMITATION MAY NOT APPLY TO YOU.

These provisions apply to Dell's three-year limited warranty only. For provisions of any service contract covering your system, refer to your invoice or the separate service contract that you will receive.

If Dell elects to exchange a system or component, the exchange will be made in accordance with Dell's Exchange Policy in effect on the date of the exchange. In any instance in which Dell issues a Return Material Authorization Number, Dell must receive the product(s) for repair prior to the expiration of the warranty period in order for the repair(s) to be covered by the limited warranty.

NOTE: If you chose one of the available warranty and service options in place of the standard three-year limited warranty described in the preceding text, the option you chose will be listed on your invoice.

Three-Year Limited Warranty (Canada Only)

Dell Computer Corporation ("Dell") manufactures its hardware products from parts and components that are new or equivalent to new in accordance with industry-standard practices. Dell warrants that the hardware products it manufactures will be free from defects in materials and workmanship. The warranty term is three years beginning on the date of invoice, as described in the following text.

Damage due to shipping the products to you is covered under this limited warranty. Otherwise, this limited warranty does not cover damage due to external causes, including accident, abuse, misuse, problems with electrical power, servicing not authorized by Dell, usage not in accordance with product instructions, failure to perform required preventive maintenance, and problems caused by use of parts and components not supplied by Dell.

This limited warranty does not cover any items that are in one or more of the following categories: software; external devices (except as specifically noted); accessories or parts added to a Dell system after the system is shipped from Dell; accessories or parts added to a Dell system through Dell's system integration department; accessories or parts that are not installed in the Dell factory; or DellWare products. Monitors, keyboards, and mice that are Dell-branded or that are included on Dell's standard price list are covered under this limited warranty; all other monitors, keyboards, and mice

(including those sold through the DellWare program) are not covered. Batteries for portable computers are covered only during the initial one-year period of this limited warranty.

Coverage During Year One

During the one-year period beginning on the invoice date, Dell will repair or replace products covered under this limited warranty that are returned to Dell's facility. To request warranty service, you must call Dell's Customer Technical Support within the warranty period. Refer to Chapter 4, "Getting Help," found earlier in this guide or "Contacting Dell" in the system *Help* to find the appropriate telephone number for obtaining customer assistance. If warranty service is required, Dell will issue a Return Material Authorization Number. You must ship the products back to Dell in their original or equivalent packaging, prepay shipping charges, and insure the shipment or accept the risk of loss or damage during shipment. Dell will ship the repaired or replacement products to you freight prepaid if you use an address in Canada, where applicable. Shipments to other locations will be made freight collect.

NOTE: Before you ship the product(s) to Dell, back up the data on the hard-disk drive(s) and any other storage device(s) in the product(s). Remove any removable media, such as diskettes, CDs, or PC Cards. Dell does not accept liability for lost data or software.

Dell owns all parts removed from repaired products. Dell uses new and reconditioned parts made by various manufacturers in performing warranty repairs and building replacement products. If Dell repairs or replaces a product, its warranty term is not extended.

Coverage During Years Two and Three

During the second and third years of this limited warranty, Dell will provide, on an exchange basis and subject to Dell's Exchange Policy in effect on the date of the exchange, replacement parts for the Dell hardware product(s) covered under this limited warranty when a part requires replacement. You must report each instance of hardware failure to Dell's Customer Technical Support in advance to obtain Dell's concurrence that a part should be replaced and to have Dell ship the replacement part. Dell will ship parts (freight prepaid) if you use an address in Canada, where applicable. Shipments to other locations will be made freight collect. Dell will include a prepaid shipping container with each replacement part for your use in returning the replaced part to Dell. Replacement parts are new or reconditioned. Dell may provide replacement parts made by various manufacturers when supplying parts to you. The warranty term for a replacement part is the remainder of the limited warranty term.

You will pay Dell for replacement parts if the replaced part is not returned to Dell. The process for returning replaced parts, and your obligation to pay for replacement parts if you do not return the replaced parts to Dell, will be in accordance with Dell's Exchange Policy in effect on the date of the exchange.

You accept full responsibility for your software and data. Dell is not required to advise or remind you of appropriate backup and other procedures.

General Provisions

DELL MAKES NO EXPRESS WARRANTIES OR CONDITIONS BEYOND THOSE STATED IN THIS LIMITED WARRANTY STATEMENT. DELL DISCLAIMS ALL OTHER WARRANTIES AND CONDITIONS, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES AND CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SOME STATES (OR JURISDICTIONS) DO NOT ALLOW LIMITATIONS ON IMPLIED WARRANTIES OR CONDITIONS, SO THIS LIMITATION MAY NOT APPLY TO YOU.

DELL'S RESPONSIBILITY FOR MALFUNCTIONS AND DEFECTS IN HARDWARE IS LIMITED TO REPAIR AND REPLACEMENT AS SET FORTH IN THIS LIMITED WARRANTY STATEMENT. THESE WARRANTIES GIVE YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE (OR JURISDICTION TO JURISDICTION).

DELL DOES NOT ACCEPT LIABILITY BEYOND THE REMEDIES SET FORTH IN THIS LIMITED WARRANTY STATEMENT OR LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION ANY LIABILITY FOR PRODUCTS NOT BEING AVAILABLE FOR USE OR FOR LOST DATA OR SOFTWARE.

SOME STATES (OR JURISDICTIONS) DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE PRECEDING EXCLUSION OR LIMITATION MAY NOT APPLY TO YOU.

These provisions apply to Dell's three-year limited warranty only. For provisions of any service contract covering your system, refer to your invoice or the separate service contract that you will receive.

If Dell elects to exchange a system or component, the exchange will be made in accordance with Dell's Exchange Policy in effect on the date of the exchange. In any instance in which Dell issues a Return Material Authorization Number, Dell must receive the product(s) for repair prior to the expiration of the warranty period in order for the repair(s) to be covered by the limited warranty.

NOTE: If you chose one of the available warranty and service options in place of the standard three-year limited warranty described in the preceding text, the option you chose will be listed on your invoice.

One-Year End-User Manufacturer Guarantee (Latin America and the Caribbean Only)

Guarantee

Dell Computer Corporation ("Dell") warrants to the end user in accordance with the following provisions that its branded hardware products, purchased by the end user from a Dell company or an authorized Dell distributor in Latin America or the Caribbean, will be free from defects in materials, workmanship, and design affecting normal use, for a period of one year from the original purchase date. Products for which proper claims are made will, at Dell's option, be repaired or replaced at Dell's

expense. Dell owns all parts removed from repaired products. Dell uses new and reconditioned parts made by various manufacturers in performing repairs and building replacement products.

Exclusions

This Guarantee does not apply to defects resulting from: improper or inadequate installation, use, or maintenance; actions or modifications by unauthorized third parties or the end user; accidental or willful damage; or normal wear and tear.

Making a Claim

Claims must be made in Latin America or the Caribbean by contacting the Dell point of sale within the guarantee period. The end user must always supply proof of purchase, indicating name and address of the seller, date of purchase, model and serial number, name and address of the customer, and details of symptoms and configuration at the time of malfunction, including peripherals and software used. Otherwise, Dell may refuse the guarantee claim. Upon diagnosis of a warranted defect, Dell will make arrangements and pay for ground freight and insurance to and from Dell's repair/replacement center. The end user must ensure that the defective product is available for collection properly packed in original or equally protective packaging together with the details listed above and the return number provided to the end user by Dell.

Limitation and Statutory Rights

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Index

A

assistance
  technical, 4-1

audio
  driver (Windows 2000), 3-11
  driver (Windows 98), 3-5
  troubleshooting, 2-13

AutoTech service, 4-2

C

call-waiting
  disabling, 2-18

CD-ROM drive
  troubleshooting, 2-13

computer
  traveling with, v

D

damaged computer
  testing, 2-11

Dell contact numbers, 4-9

Dell Diagnostics
  about, 2-3
  boot device sequence, 2-4
  Diagnostics Menu, 2-5, 3-3
  exit, 2-9
  Help menu, 2-8
  main screen, 2-6
  starting, 2-4
  system configuration, 2-7

Diagnostics Checklist, 4-6

dial tone
  irregular, 2-18

diskette drive
  cleaning, 2-13
  troubleshooting, 2-13

display
  troubleshooting, 2-14

drivers (Windows 2000)
  about, 3-11
  audio, 3-11
  Intel SpeedStep, 3-15
  software DVD decoder, 3-14
  touch pad, 3-13
  video, 3-12

drivers (Windows 98)
about, 3-6
audio, 3-5
DVD decoder, 3-9
Intel SpeedStep, 3-10
modem, 3-8
Softex BayManager, 3-7
touch pad, 3-6
video, 3-6
DVD-ROM drive
region code, 3-10, 3-15
troubleshooting, 2-13

E

electromagnetic compatibility, D-1
electromagnetic interference, D-1
electronic information service, 4-2
electronic quote service, 4-2
electronic support service, 4-2
electrostatic discharge. See ESD
error messages, C-1
ESD, ix
external devices
connecting, 1-9

F

fax
troubleshooting, 2-18
FCC notice
fax branding, D-4
modem information, D-3
floppy drive
See diskette drive

G

getting help, 4-1
grounding procedure, ix

H

hard-disk drive
installing, 1-4
preventing damage, 1-4
preventing data loss, 1-4
removing, 1-4
repackaging, 1-6
returning to Dell, 1-5
troubleshooting, 2-15
hardware conflicts
troubleshooting, 2-15
help tools
Internet, 4-2
list of, 4-1
hibernate file
about, 3-2
create, 3-4
delete, 3-3
enable support, 3-4
view file information, 3-4

I

infrared port
configuring, 2-16
troubleshooting, 2-16
Intel SpeedStep
installing (Windows 2000), 3-15
installing (Windows 98), 3-10
international access codes
about, 4-8
instructions for using, 4-7

Internet connection
troubleshooting, 2-18
Internet help tools, 4-2
IR port
See infrared port

K

keyboard
troubleshooting, 2-15

M

Macrovision, E-8
media bay
swapping devices, 1-2
memory
192-MB modules, 1-6
confirming configuration, 1-9
installing module, 1-6
removing module, 1-7
troubleshooting, 2-17
modem
troubleshooting, 2-18
monitor
troubleshooting, 2-14
mouse
troubleshooting, 2-19

O

operating system
installing, 3-1
optional upgrades, 1-1
order problems, 4-3
order status system, 4-3

P

PC Cards
troubleshooting, 2-18
PhoenixBIOS Setup Utility
See system setup program
popup.ocx, 3-17
port replicator, 1-9
product information, 4-4

Q

Quiet Boot, 2-1

R

regulatory notices, D-1
restarting the computer, 2-10
return policy, E-7
returning items
for credit, 4-4
for repair, 4-4
under warranty, 4-4

S

safety instructions
ESD prevention, ix
general, v
working inside your computer, ix
save-to-disk suspend file
See hibernate file
service tag sequence, 4-5
shielded signal cables, D-2
Softex BayManager
installing (Windows 98), 3-7

software
installing drivers (Windows 2000), 3-11
installing drivers (Windows 98), 3-5
installing DVD decoder (Windows 2000), 3-14
installing DVD decoder (Windows 98), 3-9
installing system, 3-1
troubleshooting, 2-19

specifications
AC adapter, A-5
audio, A-3
battery, A-4
bus architecture, A-1
chip set, A-1
connectors, A-2
display, A-3
environmental, A-6
keyboard, A-4
memory, A-2
microprocessor, A-1
PC Card, A-2
touch pad, A-4
video, A-3

SpeedStep utility, 3-10, 3-15

support
AutoTech service, 4-2
electronic information service, 4-2
electronic quote service, 4-2
electronic support service, 4-2
Internet addresses, 4-2
TechFax Service, 4-3
technical, 4-1

system *Help*
downloading, 3-17
installing, 3-16

system messages, C-1

system setup program
accessing, B-1
boot menu, B-7
exit menu, B-8
keyboard commands, B-2
main menu, B-3

system setup program *(continued)*
menus, B-1
power menu, B-6
security menu, B-5
system devices menu, B-4

T

TechFax service, 4-3

technical support
about, 4-1, 4-3
Inspiron 5000 toll-free number (U.S. only), 4-19

toll-free numbers, 4-7

touch pad
driver (Windows 2000), 3-13
driver (Windows 98), 3-6
troubleshooting, 2-19

troubleshooting
audio, 2-13
basic, 2-1
CD-ROM drive, 2-13
checking connections, 2-2
diskette drive, 2-13
display, 2-14
DVD-ROM drive, 2-13
environmental factors, 2-2
fax, 2-18
hard-disk drive, 2-15
hardware conflicts, 2-15
infrared port, 2-16
Internet connection, 2-18
Internet tools, 4-2
keyboard, 2-15
memory, 2-17
modem, 2-18
monitor, 2-14
mouse, 2-19
PC Cards, 2-18
power source, 2-3
software, 2-19
television connection, 2-20
touch pad, 2-19

V

video
driver (Windows 2000), 3-12
driver (Windows 98), 3-6
troubleshooting, 2-14

W

warranty information, E-1
wet computer
drying out, 2-10
World Wide Web help tools, 4-2

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Postscript Imaging and Printing Specs

JOB TITLE:	Dell™ Inspiron™ 5000 Reference and Troubleshooting Guide s:\systems\blanco\ref\a01/english
LANGUAGES:	English
PART NUMBER:	3959U Rev. A01 checked empact: Currently at **A00**
PREPARED BY:	Gloria Salinas
CONTACT:	Donna Moore 512-728-3439
EMAIL ADDRESS:	donna_moore@dell.com
VENDOR:	Copyright/EMF/APCC/CC/BP
DATE:	3/14/00
COMPUTER SOURCE:	Dell PC
APPLICATION SOFTWARE:	FrameMaker Version 5.5.2
POSTSCRIPT FILES:	Yes
POSTCRIPT DRIVER USED:	Linotronic 330
COLOR SEPARATED FILES:	Yes
COMPRESSED & TESTED:	Yes
PAGE SIZE:	7.5 x 9 inches
PAGE ORIENTATION:	Portrait
LINE SCREEN:	133 lpi
TRANSPORT MEDIA:	FTP
HALFTONES/SCREENS/	No
DUOTONES:	Yes Black and PMS 286
COLOR(S):	Cover - Black, Pantone 130CV, Pantone 286CV (duotone: Black and PMS 286) Text - Black, PMS 300CV
COLOR MARKUP PROVIDED:	Yes

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	Preface:	3959upr1.ps	4	xi-xiv
	Table of Content:	3959utc1.ps	6	xv-xx
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	Chapter 4:	3959uc41.ps	20	4-1–4-20
	Appendix A:	3959uaa1.ps	6	A-1–A-6
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